



MAYO RIVER STATE PARK MASTER PLAN

A GUIDE TO FUTURE IMPROVEMENTS

ADOPTED AUGUST 2021

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INTRODUCTION

MAYO RIVER STATE PARK MASTER PLAN



LOWER MAYO BEACH

Created in 2003 by the NC Legislature, Mayo River State Park is one of the newest parks in the North Carolina State Park system. Interim facilities opened to the public in 2010. This master plan provides recommendations for future improvements to expand the park's facilities and recreational opportunities.

The Mayo River begins at the North Carolina/Virginia state line where the North and South Mayo Rivers converge to create the Mayo River. The river flows south for 16 miles to where it joins the Dan River just south of Madison in Rockingham County. The park covers more than 2,700 acres. Much of the park's land is not easily accessible, nor is it all connected. The study area encompasses the river corridor and includes all state-owned land and considers other land to the east and west of the river.

The Mayo has long been a draw for paddlers. Class II and III rapids can be found in the upper section near the Anglin Road bridge. Once past the rapids, the river calms down creating a leisurely and scenic paddle until it reaches the Avalon Dam. Two hydroelectric dams prevent paddling the entire length of the river. Paddlers must exit the river before reaching the Avalon Dam.

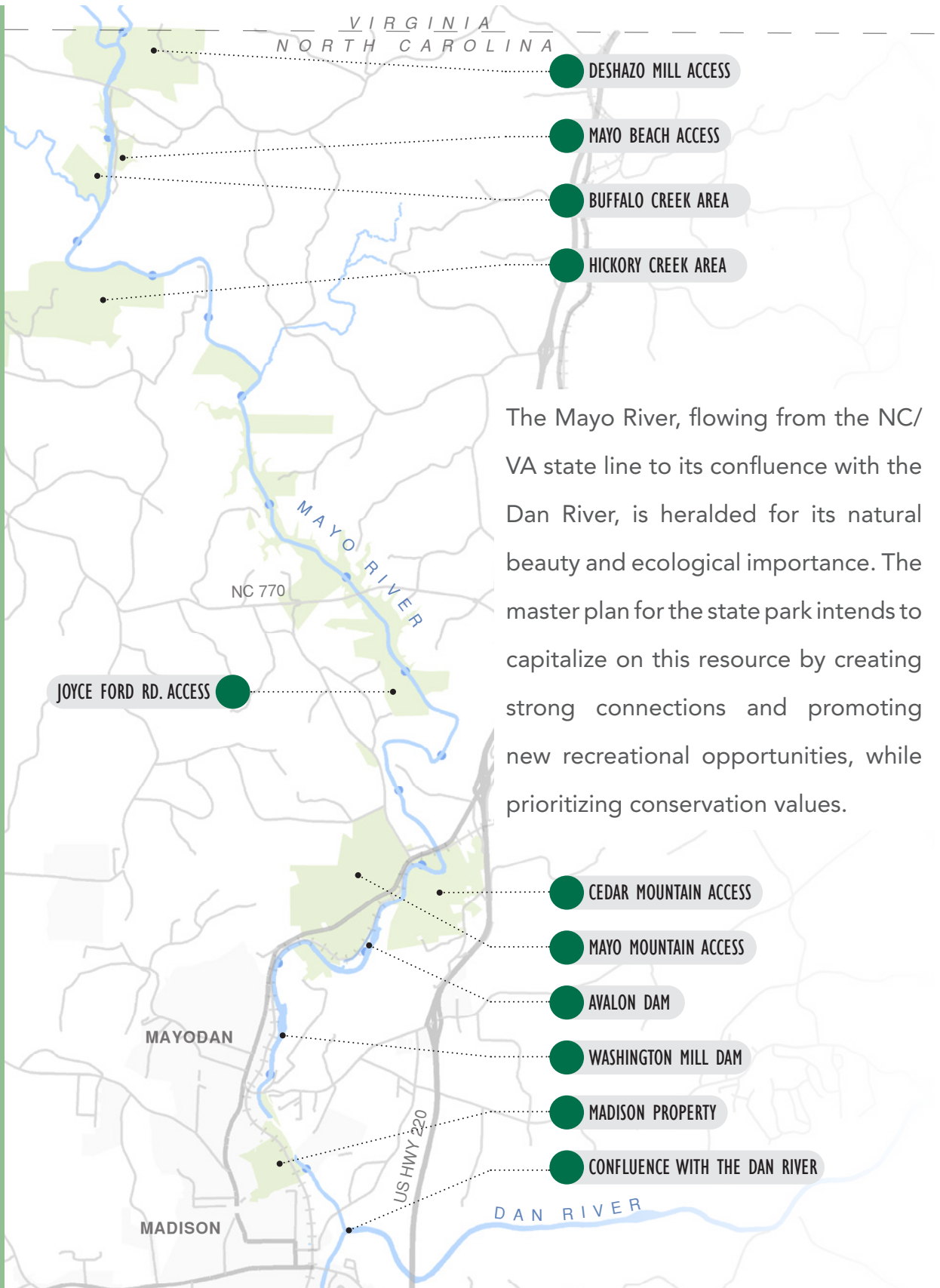


CONFLUENCE OF NORTH AND SOUTH FORKS OF THE MAYO RIVER

Currently, the last opportunity to exit the river is the access at highway Business 220.

The FERC license for the hydroelectric company includes language requiring the owners to provide portage around the dams as well as signage upriver of the Avalon Dam indicating hazardous conditions ahead. The Mayo River Dam Portage Assessment conducted by N.C. State Trails Program in 2013 noted that portaging is not feasible at this time due to the terrain, river bottom conditions and length of portage that would be required. While this report will not address a specific portage option, it recommends that the North Carolina Division of Parks and Recreation (Division) continue

CORRIDOR MAP



The Mayo River, flowing from the NC/VA state line to its confluence with the Dan River, is heralded for its natural beauty and ecological importance. The master plan for the state park intends to capitalize on this resource by creating strong connections and promoting new recreational opportunities, while prioritizing conservation values.

MISSION STATEMENT

The North Carolina Division of Parks and Recreation exists to inspire all its citizens and visitors through conservation, recreation and education.



CONSERVATION

To conserve and protect representative examples of North Carolina's natural beauty, ecological features, recreational and cultural resources within the state parks system;



RECREATION

To provide and promote safe, healthy and enjoyable outdoor recreational opportunities throughout the state; and



EDUCATION

To provide educational opportunities that promote stewardship of the state's natural and cultural heritage.

discussions with the dam owners to find a mutually beneficial option that is safe and cost effective.

Once past the Washington Mills dam, the Mayo flows through the towns of Mayodan and Madison before joining with the Dan River. Access to the river through these towns is limited.

The historic roots of the park are at the Mayo Mountain Access area on the west side of the river. This area has been identified by the NC State Historic Preservation Office (NCSHPO) as a historic area and features fishing ponds, hiking trails, a picnic shelter, group camping and the park office. The picnic shelter is a prominent structure. The Deshazo Mill Access along the upper portion of the park and on the east side of the river includes a small parking lot, picnic area and a hiking trail to the Fall Creek Waterfall and Mayo River. Anglin Mill Access (also known as the Mayo Beach Access or Boiling Hole) is one of the newest property acquisitions and is a very popular spot among locals. The Anglin Mill Access, also on the east side of the river, features fishing spots, informal canoe and kayak launches and a sandy beach. This access area has no formal parking lot or any other facilities. Other access points include the Hickory Creek Access on the west side of the river, which includes an informal trailhead parking area and an improved trail to the river, and the Mayodan Access at route 135 on the east side. Paddlers can put in at the Mayodan Access for the final stretch of the Mayo before it connects with the Dan River. Park visitation has been rising steadily

since the park's inception. Through 2019 the number of visitors has never exceeded 100,000; however, the number of visitors nearly doubled in 2020. This has been attributed to people's desire to get outside during the Covid-19 pandemic.



FALL CREEK WATERFALL

The Mayo River is also known for its ecological importance. The Mayo is home to several rare and endangered plant and animal species. Water quality is extremely high, which supports a variety of aquatic life. Concentrations of significant natural plants exist on the west side of the river at the northern end and in the shadow of Cedar Mountain on the east side. Native American artifacts, including fish weirs, can be found throughout the corridor. Protection of these natural and cultural features along the river is an important tenant of this master plan.



AVALON DAM

HISTORY

The Mayo River played a key role in textile industry in North Carolina. Two textile mills and several grist mills located along the river to harness its power. The Mayo Mill opened in 1895 and the Town of Mayodan formed around it. In 1921, the mill was consolidated with others in Virginia and took the name Washington Mills. The mill operated until it was

closed permanently in 1999. The building was eventually torn down in 2012, despite being on the Historic Register of Places. Avalon Mill, two miles up river from Washington Mill, opened in 1900 and the village that developed around the mill was home to 450 residents. In 1911,



AVALON MILL FIRE / PHOTO COURTESY OF NC DIGITAL HERITAGE CENTER

a fire tore through the mill destroying it. The mill was never rebuilt and houses were moved to Mayodan. Remembering and revealing the history of these mills and villages is important to the planning process and master plan recommendations.

The history of Mayo River State Park begins with Mayo Park, which opened in 1948 and was created by the Washington Mills Company for their employees. Mayo Park was located at the current Mayo Mountain

GOALS & OBJECTIVES

The goal of this master plan is to provide a long-term vision for future improvements to Mayo River State Park. The plan identifies priorities for future improvements that will be implemented as demand and resources allow. It is not intended to be implemented in full immediately. The master plan is meant to be flexible, allowing for ongoing changes to funding and priorities of the division of Parks and Recreation and the State of North Carolina.

The goal of the master plan is to define an appropriate balance between future development and conservation. It is important that the plan compliment recreational opportunities currently offered at the park as well as address the current deficiencies and future needs. The recommendations outlined in the plan respond to demonstrated needs of stakeholders and the community while respecting the mission of the Division.





HISTORIC SHELTER AT MAYO MOUNTAIN ACCESS



CEDAR MOUNTAIN

Access where the current park office is located. Washington Mills Company hired the firm of Raymond and Rado to design a bathhouse and picnic shelter for the park. Antonin Raymond, a protégé of Frank Lloyd Wright, considered the picnic shelter to be one of his better designs. Raymond worked with Landscape Architect F. Elwood Allen on the design of facilities at Mayo Park. The swimming beach closed in the mid 1960s due to water quality issues and the bathhouse and shelter fell into disrepair. In the early 2000s, the bathhouse collapsed due to deterioration and was removed; however, the shelter was renovated and remains in use. The picnic shelter can be rented for picnics and events.

PREVIOUS PLANS

Several plans for the park and surrounding area have been developed by various groups. As part of this planning process, the project team reviewed these plans. In conjunction with the goals and objectives of the Division, ideas and analysis from the previous plans informed the process as well as the recommendations of this master plan.

PREVIOUS PLANNING DOCUMENTS

- Mayo River State Park & Scenic River Study by Shawn Mck. Clotworthy (December 1986)
- Mayo River State Park Master Plan Project by William Butler and sponsored by the Dan River Basin Association (2004)
- NC STEP Economic Development Strategic Plan & Implementation Strategy for the Mayodan Board of Commissioners (November 2013)
- Mayo River Recreation Access Action Plan / Phase 1 by Western Rockingham Rivers and Trails Group for the Piedmont Land Conservancy (August 2016)
- Madison Rivers & Trails by Piedmont Triad Regional Council, Dan River Basin Assoc. and Round Rock Design for the Town of Madison (February 2018)
- Washington Mills Park Master Plan by Foothills Planning + Design and the Piedmont Triad Regional Council for the Town of Mayodan (January 2019)
- Mayo River Dam Portage Assessment by N.C. State Trails Program (June 2013)
- Repurposing a Ruin: Grant Funding for a Small Town / Washington Mills – Mayodan, NC by Jordan Thompson, NCDEQ Brownfields Manager (October 2019)
- Feasibility Study for a State Park on the Mayo Rivers in Henry County and Mayo Scenic Rivers Study by the Virginia Department of Conservation and Recreation (November 2007)
- 2007 Virginia Outdoors Plan: Charting the Course for Virginia's Outdoors
- Parks for a new Century (2001)
- Rockingham County Natural Heritage Inventory – by RJ Commans and Ramona Bates- March 1999



2 METHODOLOGY

MAYO RIVER STATE PARK MASTER PLAN



PROJECT TEAM EXPLORING CEDAR MOUNTAIN WITH THE FORMER PARK SUPERINTENDANT

The master plan process was conducted over a 9-month period, starting in March of 2020 and completed in December of 2020. The planning process consisted of five distinct phases from start to finish. Boots on the ground, community engagement and clear and frequent communication and coordination with Parks staff were important aspects of our approach.

INFORMATION GATHERING

Throughout the planning process, information gathering never ceased. The design team went about this process through several methods, including multiple site visits, input from a variety of stakeholders and the community. The team also poured through digital data, including national and state databases and GIS data provided by the State of North Carolina.

A key piece to information gathering is conducting site visits. Experiencing the site in person helps to identify opportunities and challenges. Visioning can only happen once the context of the space is understood. The project team made multiple visits to the Mayo River State Park and surrounding area. The team hiked several areas of park property with the park superintendent, including:

- Confluence of the North and South Mayo where the Mayo forms
- Deshazo Mills access, Fall Creek and Byrd Ledge
- The Anglin Mill Road Bridge Access and Boiling Hole
- Hickory Creek tract
- Joyce Ford Road tract
- Avalon Mill Dam
- Mayo Mountain Access
- Cedar Mountain
- Washington Mill site
- Rt. 135 Access

During these hikes, the team documented the surrounding context through photographs, mapping and discussions with the park ranger. Opportunities and challenges were marked on maps; notes from the ranger were scribbled in notebooks; photos documented the conditions.

On another occasion, members of the project team, along with representatives from the NCDCCR, took a paddle trip down the Mayo River. This trip began just below the Boiling Hole at the Anglin Mill Road access and concluded at the US BUS 220 takeout. The paddle trip provided a different perspective from the earlier hikes. River access and the river experience is going to be an important piece of the master plan and the future improvements. Experiencing the river from the water was critical to the visioning and understanding of the site. The paddle revealed a lot about the river, including the character of the water, access challenges, paddle times and typical conditions. The paddle also revealed a beauty that is not fully apparent from current access points.

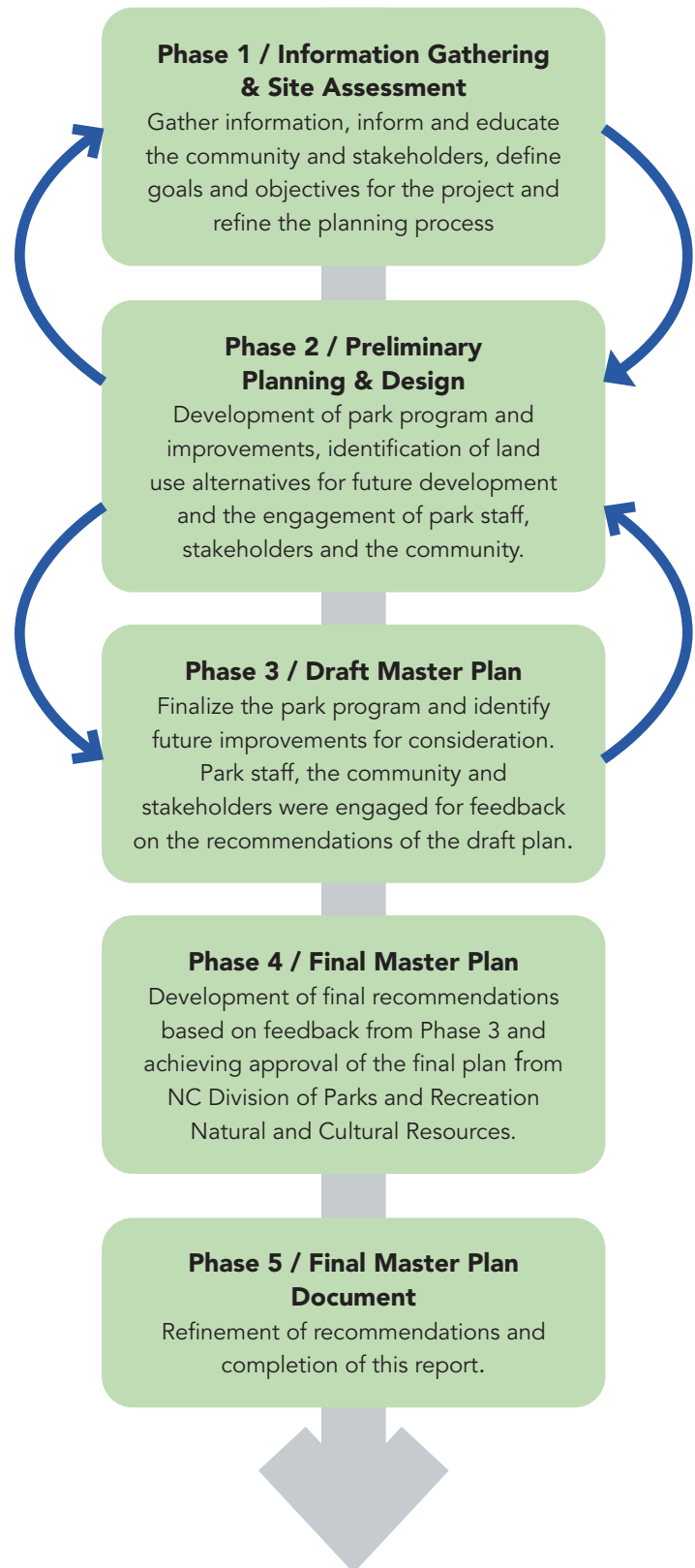


PROJECT TEAM PADDLING ON THE MAYO RIVER

Getting people to the water, as well as in and out of the water, will be a critical component of the master plan.

Gathering information does not begin or stop with visiting the site. Input from stakeholders was also an important part of the information gathering process. A Stakeholder Committee was formed to provide local insight and perspective. Stakeholders included long-time residents, park staff, town officials, and representatives from various advocacy groups, among others. Stakeholders provided a level of knowledge and passion about the Mayo River and surrounding area that was invaluable. Through discussions with the stakeholders the team was able to tap into some of that knowledge and learn about the history of the area, existing uses and points of interest, as well as understanding the importance of the park to

MASTER PLAN PROCESS





MAPPING WITH PARK STAFF



HIKING HICKORY CREEK ACCESS



SITE VISIT AT THE NORTH AND SOUTH MAYO RIVER CONFLUENCE



EXPLORING THE FORMER GIRL SCOUT CABIN AT MAYO MOUNTAIN ACCESS

surrounding communities, Rockingham County and North Carolina. Stakeholders shared their passions and offered opinions on conservation, development, recreation opportunities and historical interpretation. The stakeholders helped provide a voice for the communities in which they live and work.

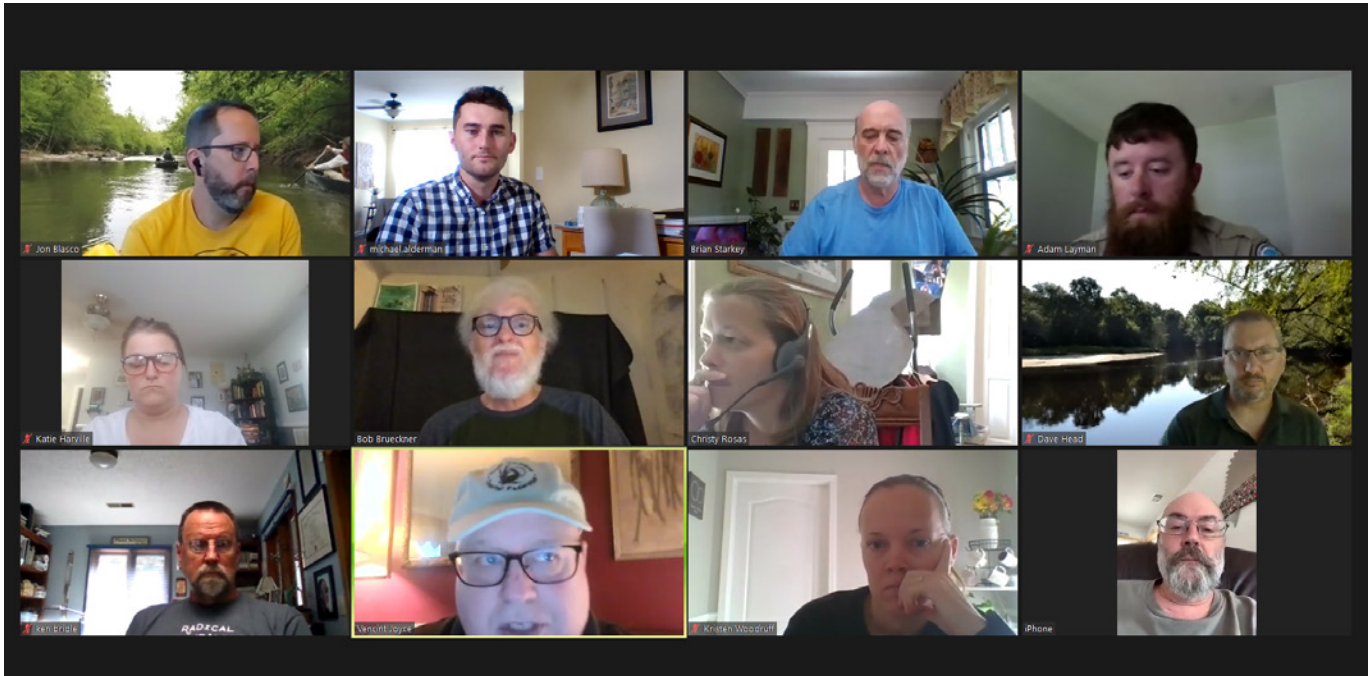
INVENTORY & ANALYSIS

Mapping played a key role in the development of the master plan by providing a detailed understanding of technical aspects related to the Mayo River and its corridor. Through the years the Division has collected various levels and forms of spatial data. This data was provided to the project team early in the process and analyzed with GIS software.

Analyzing the data was important to understanding what resources need to be protected and where the opportunities for improvements are possible while helping clarify opportunities and challenges. A clear and thorough understanding

LEVELS OF ANALYSIS

- Hydrology (wetlands, floodplains, streams & creeks)
- Cultural features (trails, dams, easements, park facilities)
- Slope
- Endangered species (plants and animals)
- Natural resources
- Vegetation types



VIRTUAL MEETING THE MAYO RIVER STATE PARK STAKEHOLDER GROUP

of the data was critical to informing decisions and supporting recommendations.

STAKEHOLDER & COMMUNITY ENGAGEMENT

Typical to large master plan projects such as this, community and stakeholder engagement play an important role in the planning of future improvements. The community and stakeholders bring a wealth of local knowledge and passion to the project. Further, stakeholders, the community and park staff will live with the recommendations of the plan and subsequent improvements to the park. Consensus among the community and stakeholder groups is critical to the success of the plan. If community members do not feel a sense of ownership in the final product, then support will be difficult to come by.

Public engagement took on many forms, including surveys, interviews and community meetings. Traditionally, community engagement would have been conducted in person. However, the Covid-19 pandemic coincided with the planning effort and changed everything. All public meetings were cancelled, and public facilities were closed. A typical community engagement process was no longer possible.

The project team found new ways to communicate and facilitate public involvement. Stakeholder meetings were held virtually using Zoom. A project website was developed that allowed respondents to view GIS data and provide input through an interactive map, online surveys and a project email address. Site visits were conducted with fewer people and more physical distancing.

On October 22nd, two virtual community meetings were conducted, one at noon and the other at 7pm. Each meeting was limited to an hour in duration. Each presentation was identical, consisting of an introduction, a 20-minute video describing the process and the plans and a 30-minute Q&A session. Questions and comments were encouraged through the chat function of the software, allowing everyone an equal opportunity to participate.

The first session had 12-15 attendees while the evening session had 3 attendees. Each session was recorded and will be included in the project archive. Discussion centered around timing of any improvements recommended by the plan, mountain bike and equestrian trails, the dams and safe portage around them, and coordination with local stakeholders.

A press release was sent out and the meetings were promoted through social media outlets starting two weeks ahead of the events as well as through the stakeholder group's networks and on the project website. The video presented during the meetings is posted on DPR's and Timmons Group social media feeds as well as on the project website. People who were unable to attend the virtual meetings had the ability to view the presentation online and submit comments. This way, everyone received the same information, regardless if they were present for the live meeting. Users are able to provide feedback through the project email address and a form on the project website.

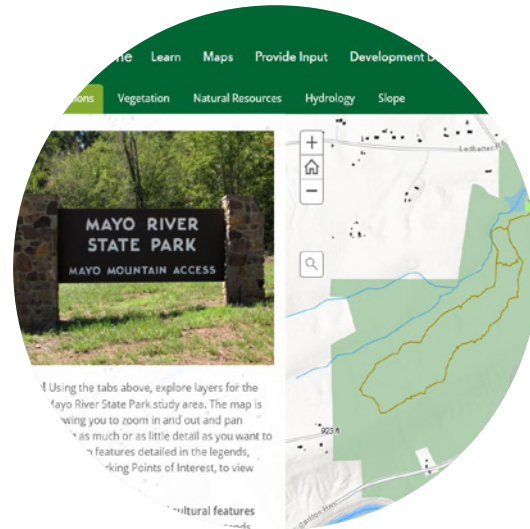
PROJECT WEBSITE

A project website (timmons.mayomasterplan.com) was set up at the beginning of the planning process in April of 2020. The site was intended to disseminate information about the planning process and the plan recommendations to the general public. The site included:

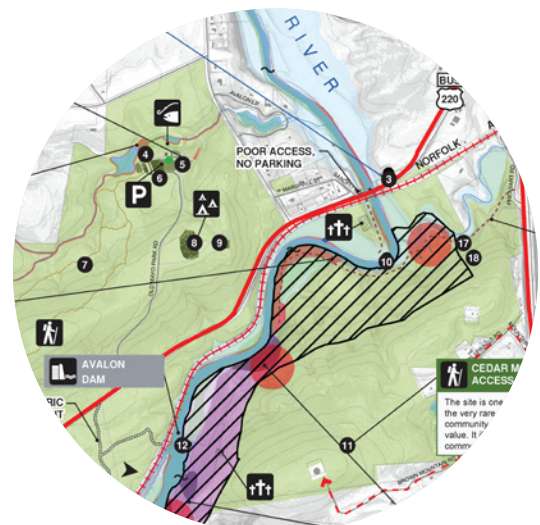
- Photo map of key areas
- GIS-based maps of important natural and cultural resources
- History of the park
- Introduction to the planning process and team
- Opportunities for public feedback
- Development diagram maps
- Final recommendation maps and site plan vignettes

Opportunities for feedback were a key component of the website. These opportunities included interactive mapping tools, links to a recreational needs survey, email links and open-response forms. The interactive mapping tools allowed users to draw on maps and make notations about important features. The planning team incorporated this information into their site analysis and plan recommendations.

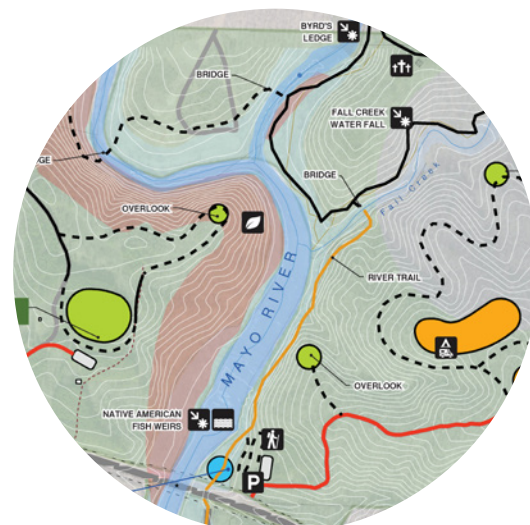
Throughout the course of the project the website had more than 7,000 page views with daily spikes during community engagement periods. The initial survey had 401 respondents from across the North Carolina and Virginia. Feedback on the final master plan recommendations was minimal. However, the Division will continue to solicit feedback from the community.



WEBSITE



MAPPING



CONCEPT PLAN



3 PROGRAMMING

MAYO RIVER STATE PARK MASTER PLAN



DESIGN TEAM EXPLORING CEDAR MOUNTAIN WITH THE PARK SUPERINTENDANT

Determining priorities for recreational activities, program and improvements is an important step in the master plan process.

The project team received recommendations and perspective from park staff, the stakeholder group and the community. Improved river access, including hiking trails along the river and boat put-in/take-out, and camping were continuously two of the highest priorities among the various groups. Discussions also revolved around including contact stations or a visitor center and limiting development in key areas to protect sensitive environmental and cultural features.

While not reflected in our polling, parking and restroom facilities also were identified as important elements that need to be provided. In addition, equestrian and mountain biking also received support. The goal is not to fill the park with intense development, but rather to be purposeful in accommodating program elements where they are most needed while respecting the land, protecting the river and maintaining the feel of a traditional North Carolina State Park.

COMMUNITY ENGAGEMENT

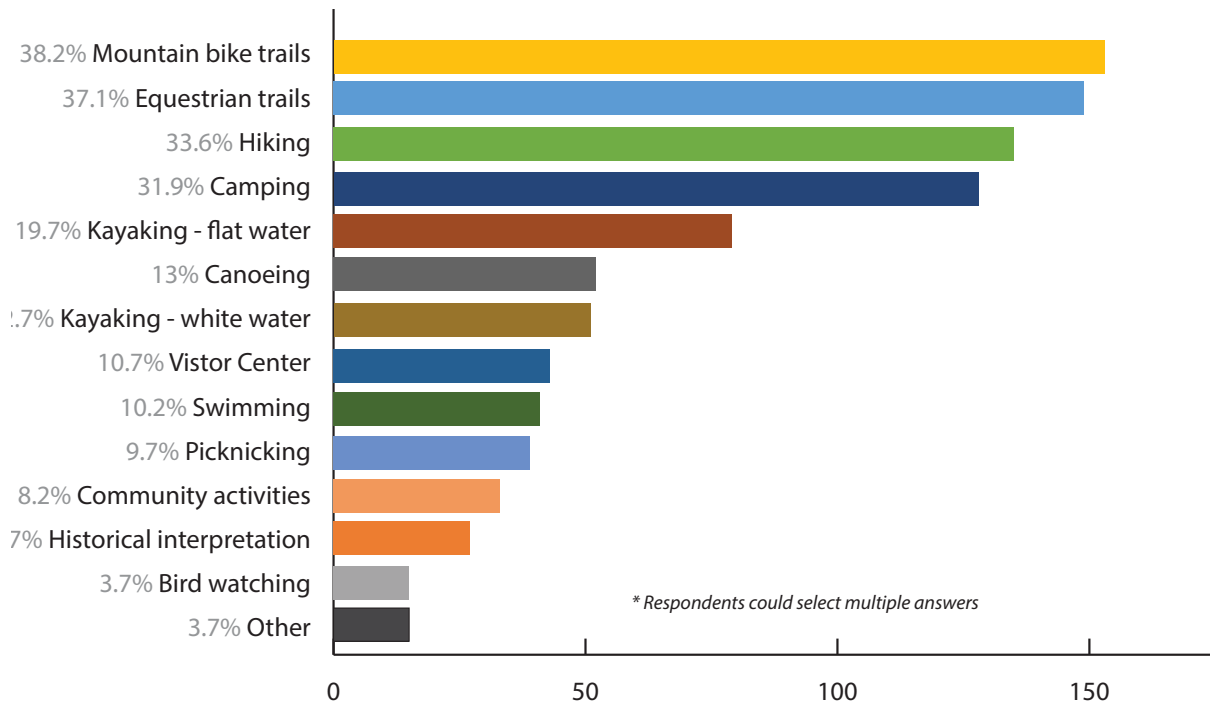
To help determine the appropriate program for the master plan, local and state-wide communities were polled to help determine priorities for the park. Early in the process, a recreation needs survey was posted to the project website and stayed open for a month. The survey had a good response rate and respondents were from the Piedmont area of North Carolina as well as the Rockingham/Stokes County areas; however, the survey received responses from other parts of the state as well as Virginia.

Where do you live?

- North Carolina Piedmont 58.1%
- Rockingham County 22.2%
- Stokes County 4.7%
- Other 4.2%
- North Carolina Mountains 4%
- North Carolina Coast 3.5%
- Virginia 3.3%



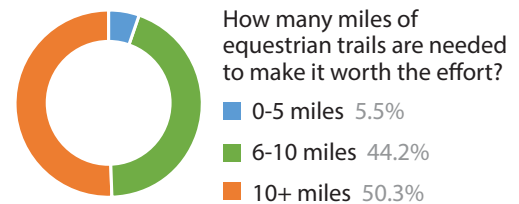
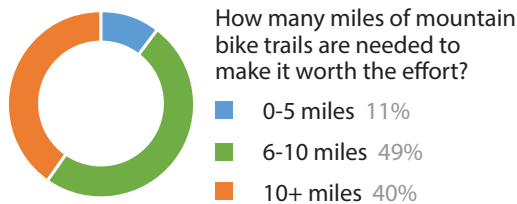
SURVEY RESULTS

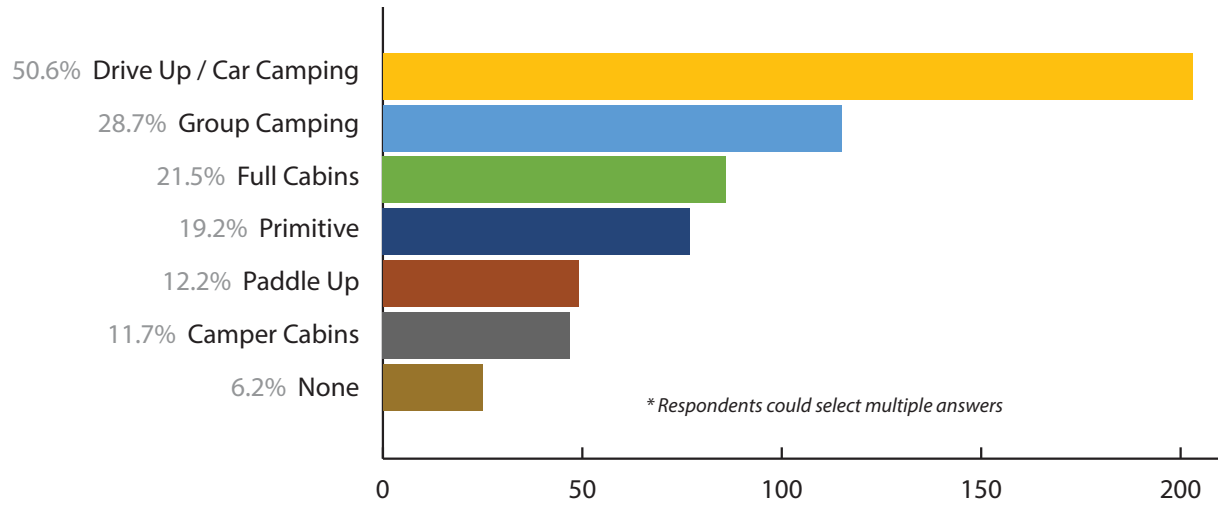


MOUNTAIN BIKING



EQUESTRIAN TRAILS (PHOTO PROVIDED BY A WEBSITE USER)





CAR / FAMILY CAMPING



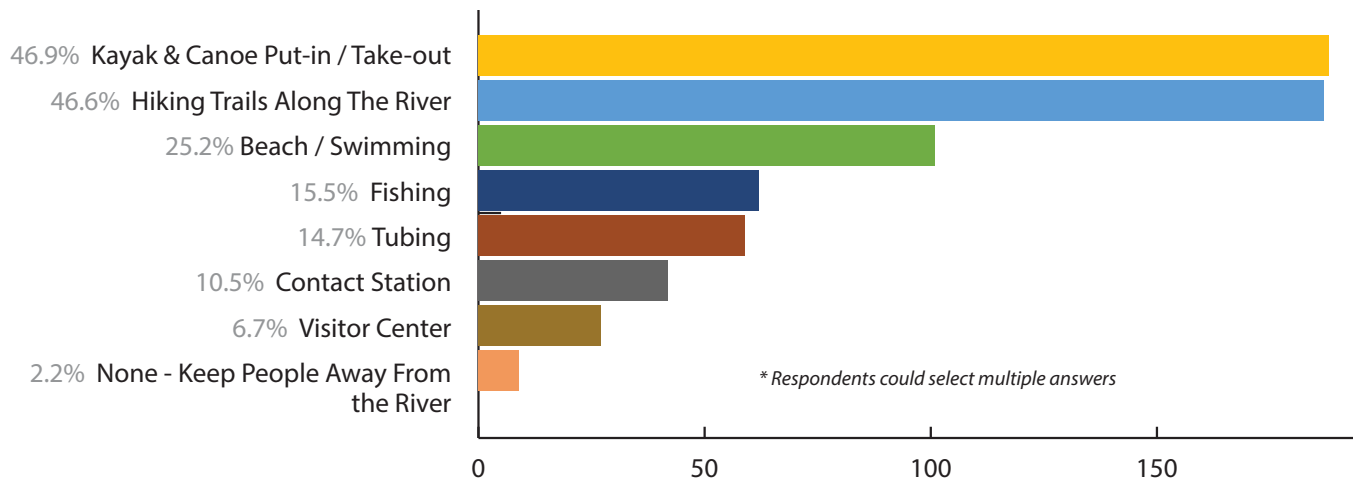
CAMPER CABINS AT RAVEN ROCK STATE PARK



GROUP CAMPING AT HANGING ROCK STATE PARK



PADDLE-UP CAMPING ACCESS AT LUMBER RIVER STATE PARK



BOAT PUT-IN/TAKE-OUT ALONG THE MAYO RIVER



HIKING AT HANGING ROCK STATE PARK

RECREATIONAL NEEDS

The survey provided questions related to recreational needs at the park, as well preferences for types of river access needed and camping. The survey also contained questions related to the demographics of respondents. The demographics were used only to understand the reach of the survey and the diversity of respondents.

The survey identified camping, boat access, equestrian trails and mountain bike trails were the highest priorities for recreational needs. Car/family camping and group camping were identified as the most needed types of camping. The most needed types of river access were identified as hiking trails along the river, kayak and canoe put-in and take-out opportunities, and swimming access. Survey results confirmed reports and anecdotes from Parks staff.

Equestrian and mountain bike trails ranked highly with the survey respondents. Trails of this nature are currently accessible or planned in other State Parks located in Rockingham County and adjacent counties. It will be important to understand the greater network of recreational activities in this region to identify recreational priorities. In order to build sustainable trails and provide adequate separation, Division guidelines suggest approximately 130 acres per mile of equestrian trails and approximately 40 acres per mile of mountain bike trails, with a minimum of 5 miles of bike trails and 10 miles of horse trails. The State currently does not own enough contiguous property to accommodate these types of trails based on the requirements stated above. The Division will re-evaluate the inclusion of bike and horse trails as they acquire additional property.



STAFF FACILITIES

Outside of the survey, there was discussion revolving around the need for a visitor center and/or contact stations. Visitor centers tend to be larger and accommodate various functions such as park offices, restrooms and community space. A contact station is smaller than a visitor center and includes a park office, public restroom and a small community space.

Staff has identified the need for an expanded maintenance facility. As the park has grown, the need for more lay down area and the ability to more safely maneuver vehicles around the maintenance area within the fencing has been noted.

Mini-maintenance facilities, which typically consist of a single bay enclosed garage, a single bay pole barn and a small lay down area, also were identified as important to consider. These facilities often are fenced in for security and safety. In several areas, as the Park develops and visitation increases, the inclusion of these facilities will need to be further evaluated.

PARTNERSHIPS

Partnership and collaboration opportunities also were identified through this process. Land owned by the Virginia State Parks system connects to the Mayo River State Park at the confluence of the North and South forks of the Mayo. The area between the North and South Mayo presents an excellent opportunity for a number of recreational opportunities including camping, boat access and a possible visitor center or contact station.

The former Washington Mills site also was identified as a strong candidate for partnership and collaboration with the Town of Mayodan. River access (boat access and trails) and historical interpretation are potential activities that can be accommodated at this site.

There is park land in Madison, though it is disconnected from the rest of the recreational areas. A partnership would strengthen the continuity between the Park and the Town.

As partnership opportunities are explored, further planning efforts will need to be undertaken.



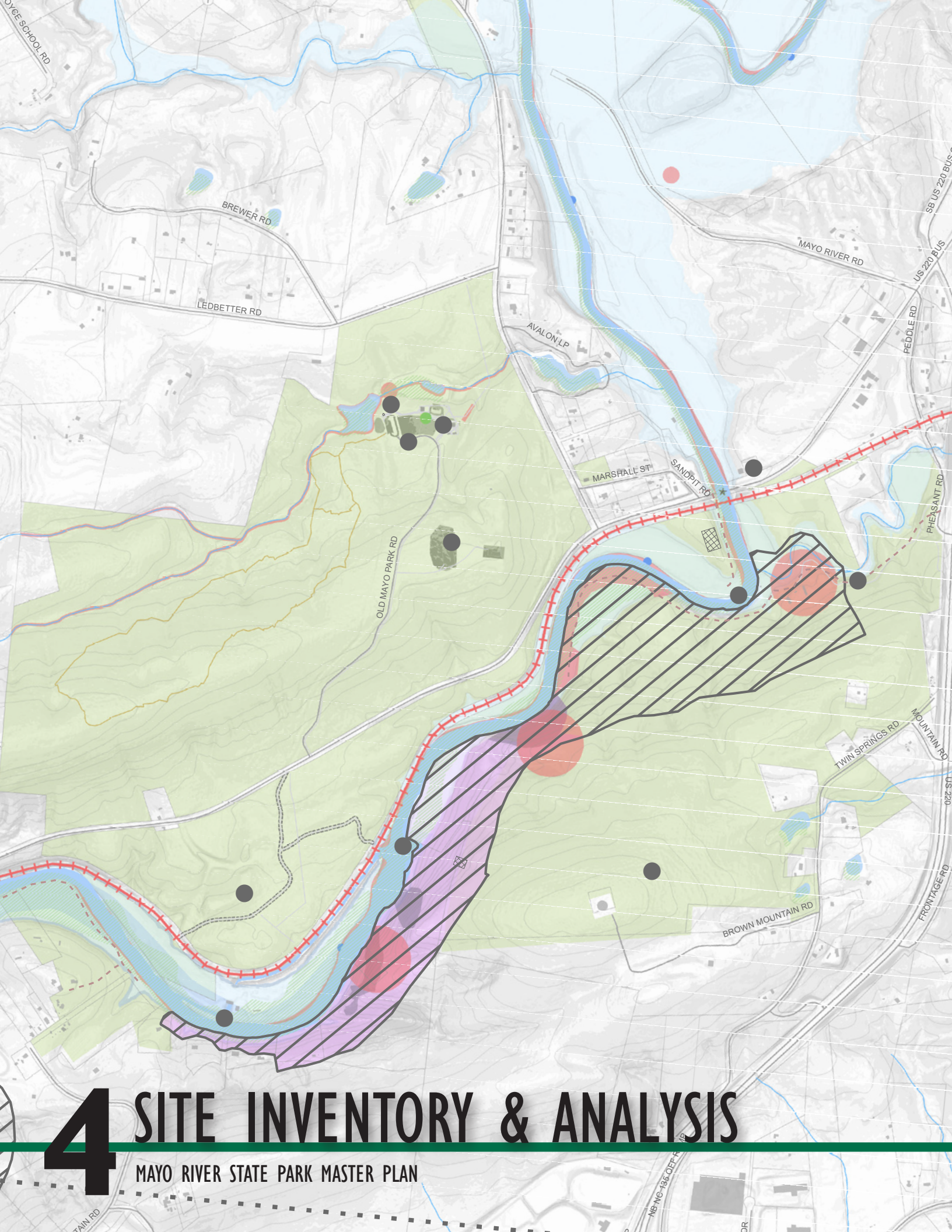
VISITOR CENTER AT PILOT MOUNTAIN STATE PARK



CONTACT STATION AT CROWDER MOUNTAIN STATE PARK AT BOULDERS ACCESS



MAINTENANCE FACILITIES AT ELK KNOB STATE PARK



4 SITE INVENTORY & ANALYSIS

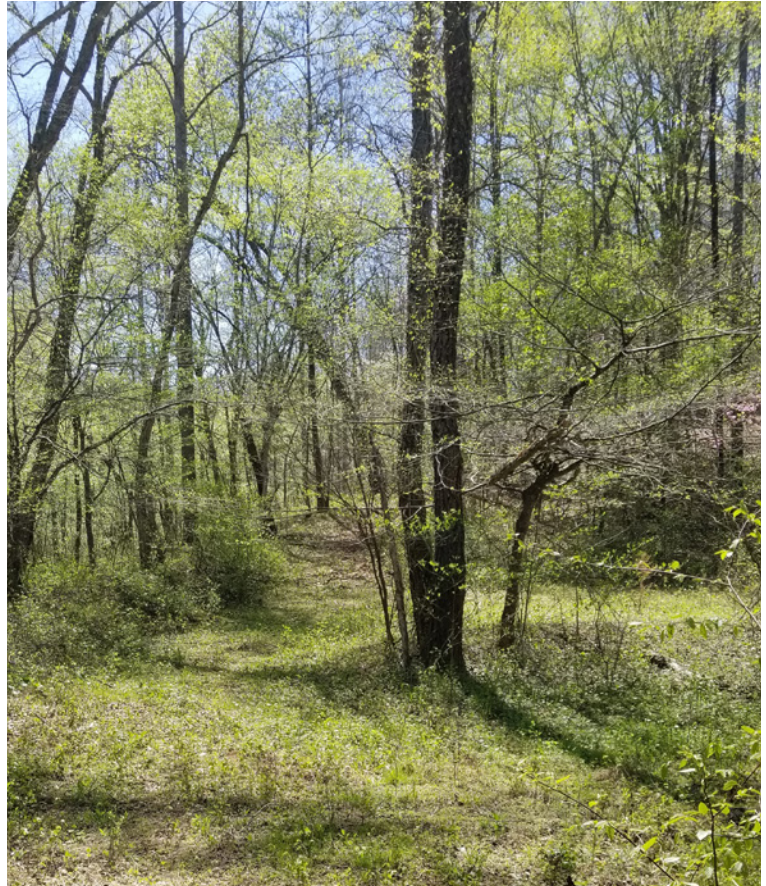
MAYO RIVER STATE PARK MASTER PLAN



A FAMILY CEMETARY



STEEP BANKS ALONG THE RIVER



FLOODPLAIN AT HICKORY CREEK ACCESS

The mapping of conditions along the Mayo River corridor was an important part of the master plan process. Spatial mapping allowed the team to better understand the existing ecological and cultural resources along with the existing natural features.

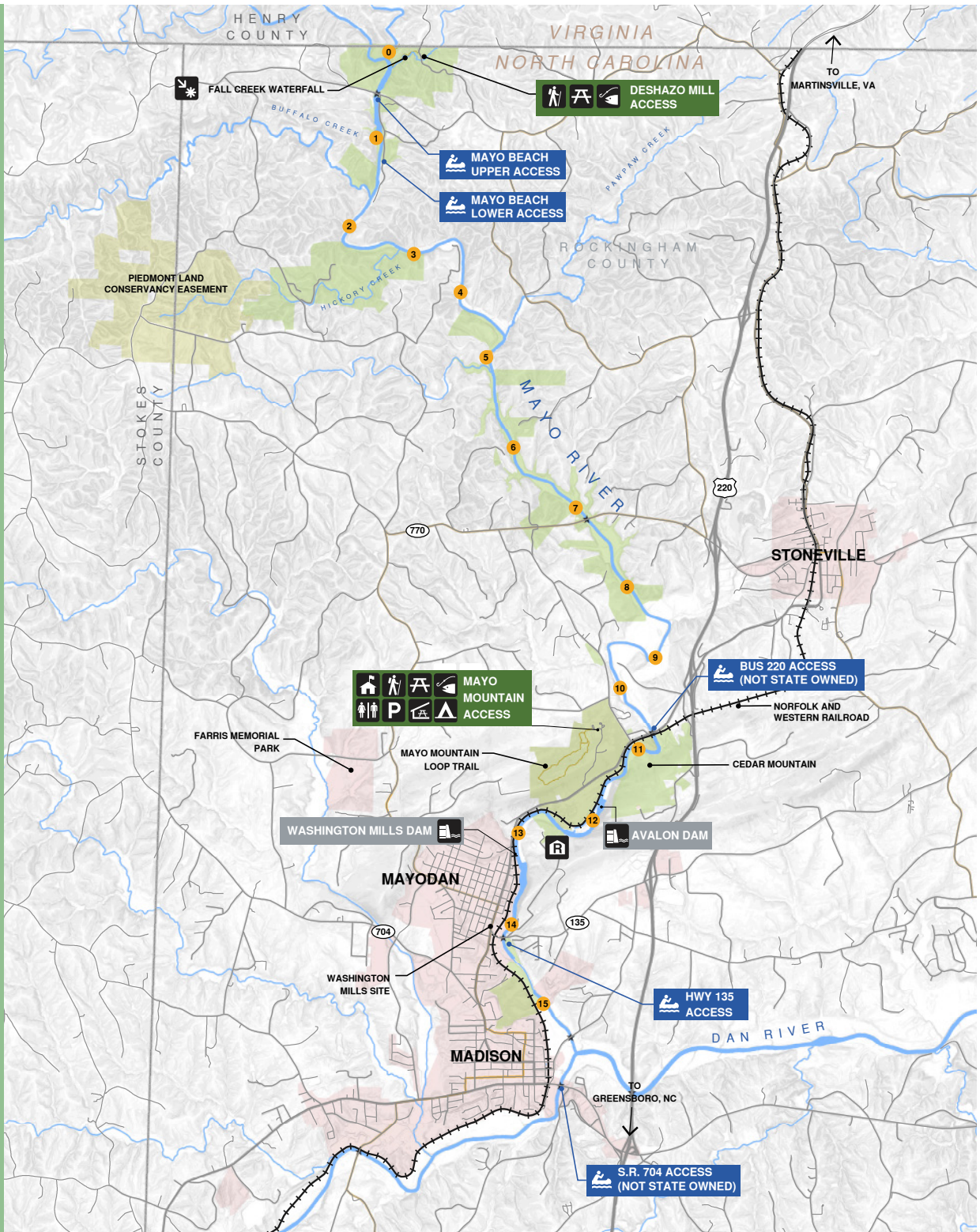
Through the years the Division has collected various levels and forms of spatial data through field research and desktop review. This data was provided to the team early in the process and was analyzed using ArcGIS software. The data includes, but is not limited to:

- Hydrology (wetlands, floodplains, streams & creeks)
- Cultural features (trails, dams, easements, park facilities)
- Topography
- Endangered species (plants and animals)
- Natural resources
- Vegetation types

A thorough analysis of the data through spatial layering allowed for a deeper understanding of the river corridor. Analyzing the various layers of data and their relationships was important to understanding what resources need to be protected as well as where the opportunities for improvements were possible. By layering the data on spatial maps, the team was able to identify opportunities and challenges for future development and improvements. For example, areas that were lacking endangered species, were near a road and were on relatively flat ground might provide an opportunity for development. Conversely, areas along the river with steep banks, sensitive ecology and floodplains were thought of to be poor choices for new river access points.

A clear and thorough understanding of the data was critical to informing decisions and supporting recommendations.

OVERALL CORRIDOR MAP / EXISTING CONDITIONS



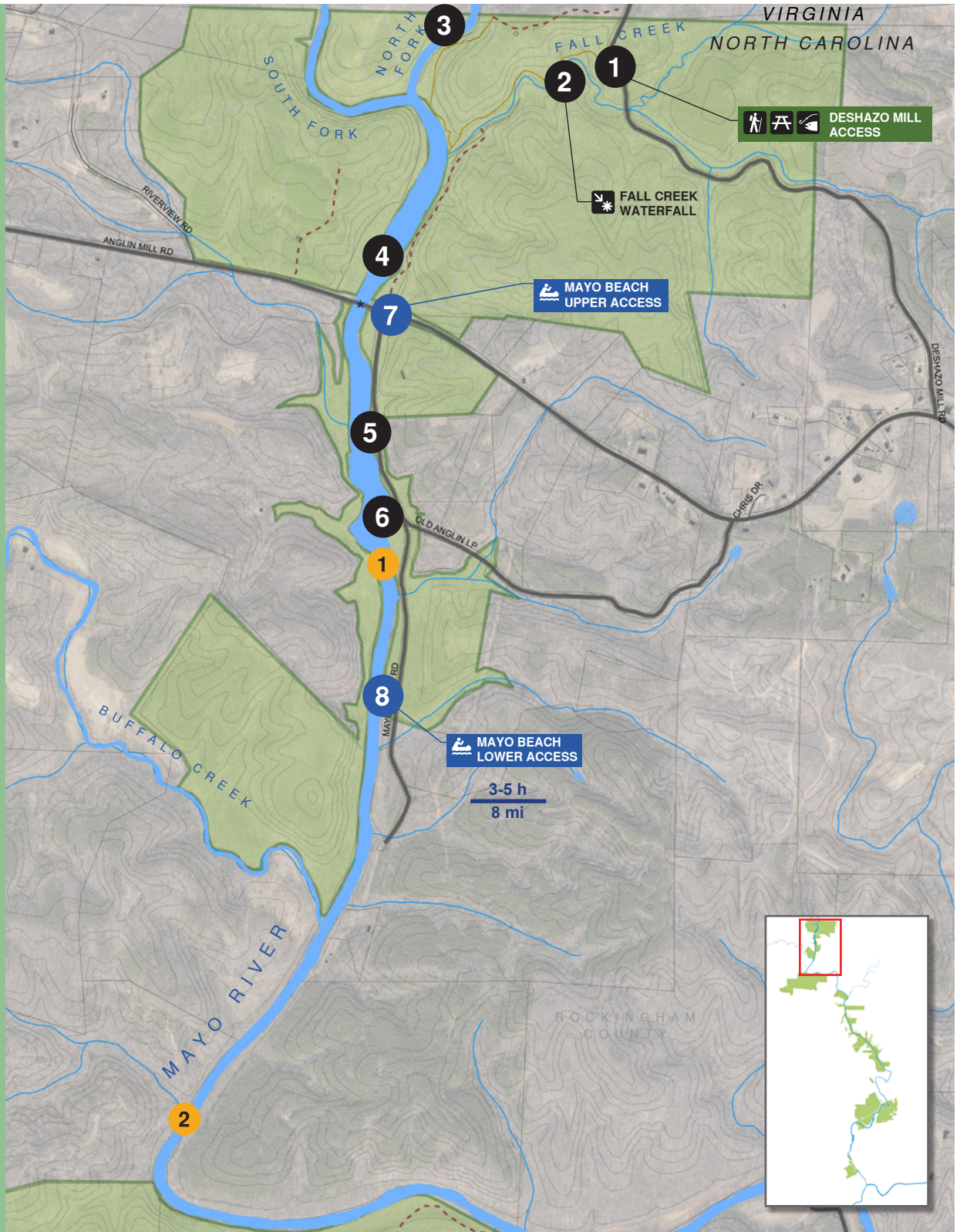
LEGEND

- | | | |
|-----------------------|-------------------|----------------------|
| MAYO RIVER STATE PARK | CITY LIMITS | EXISTING LAUNCH |
| ROADS | WATERWAYS | EXISTING PARK ACCESS |
| RAILWAY | RIVER MILE MARKER | CONSTRAINT |

0 2,500 5,000 10,000 Feet



EXISTING CONDITIONS



LEGEND

MAYO RIVER STATE PARK

BUILDINGS

ROADS

RAILWAY

TRAILS

SOCIAL TRAILS

1 RIVER MILES

1 DESHAZO MILL ACCESS TRAILHEAD

This site is the trailhead for Fall Creek Falls and the Mayo River Trail, a 1.3-mile out and back trail that features a waterfall and is good for all skill levels. There are currently no restroom facilities. There is however, a small parking lot access, with several picnic tables and grills.

2 FALL CREEK WATERFALL

The trail from Deshazo Mill Access follows along Fall Creek to the 15-20-foot waterfall. Remnants of the mill structure's foundation remain.



FALL CREEK WATERFALL

3 BYRD'S LEDGE

The North Mayo slowly winds from Virginia into North Carolina until it joins with the South Mayo to form the Mayo River. Byrd's Ledge sits along the North Mayo and is a rock outcropping that was a landmark when the state line was surveyed and named for Mr Byrd. An abandoned roadbed follows the river allowing for easy pedestrian access to Byrd's Ledge and to Virginia State Park land.



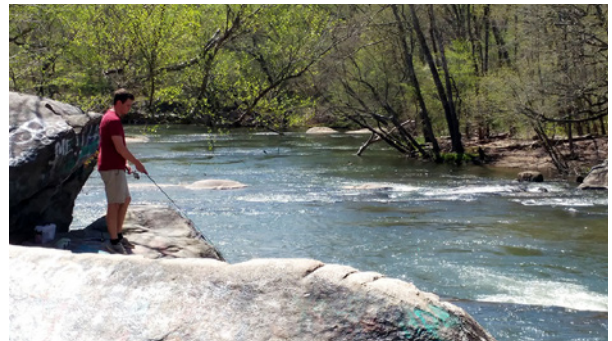
ROCK OUTCROPPINGS IN THE MAYO RIVER AT BYRD'S LEDGE

4 FISH TRAPS

Several well-preserved fish weirs (fish traps) built by American Indians can be spotted while paddling the Mayo. They were built by some of the earliest humans to live along the Mayo, the Dan River culture, believed to be ancestors of the Saura Indians who left the basin after 1700. Woodland village sites existed near the weirs. Fragments of tobacco pipes, arrowheads and pottery have been found along the riverbanks and feeder streams.

5 BOILING HOLE

This is the only Class III rapid along the Mayo River. This is also a popular spot among local residents to spend time on the river and fish. There are currently no restroom facilities or formal parking at this location.



FISHING IS POPULAR AT THE MAYO BEACH ACCESS AREA

6 MAYO BEACH

Mayo Beach, also referred to as "Anglin Mill Beach", is a popular spot for those preferring to swim, fish and tube. It is not uncommon to see a large crowds of people using the beach on weekends. No restrooms or formal parking are currently provided in this area.

7 MAYO BEACH UPPER RIVER ACCESS

This access is directly below Anglin Mill Bridge. The access includes a concrete boat ramp. The next takeout is 1.5 miles downstream at the Mayo Beach Lower Access.

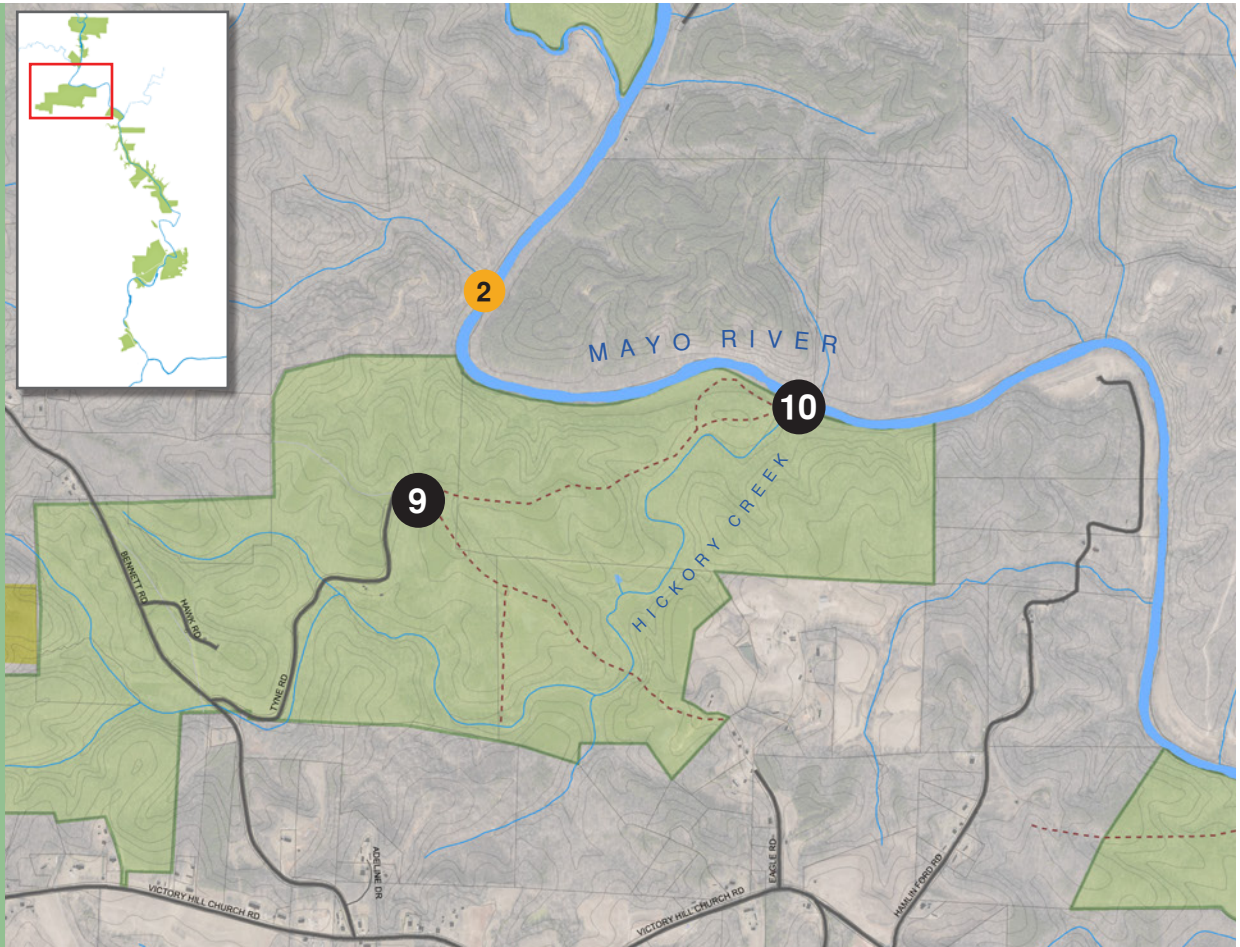
8 MAYO BEACH LOWER RIVER ACCESS

This river access is accessible via Anglin Mill Loop Road. This river access is unimproved and there is no formal parking. The next available take out for paddlers is located adjacent to the BUS 220 Bridge, which is not on State Park property.



MAYO BEACH LOWER RIVER ACCESS





LEGEND

 MAYO RIVER STATE PARK	 BUILDINGS	 ROADS	 RAILWAY	 SOCIAL TRAILS
---	---	--	---	---

9 HICKORY CREEK INFORMAL TRAILHEAD

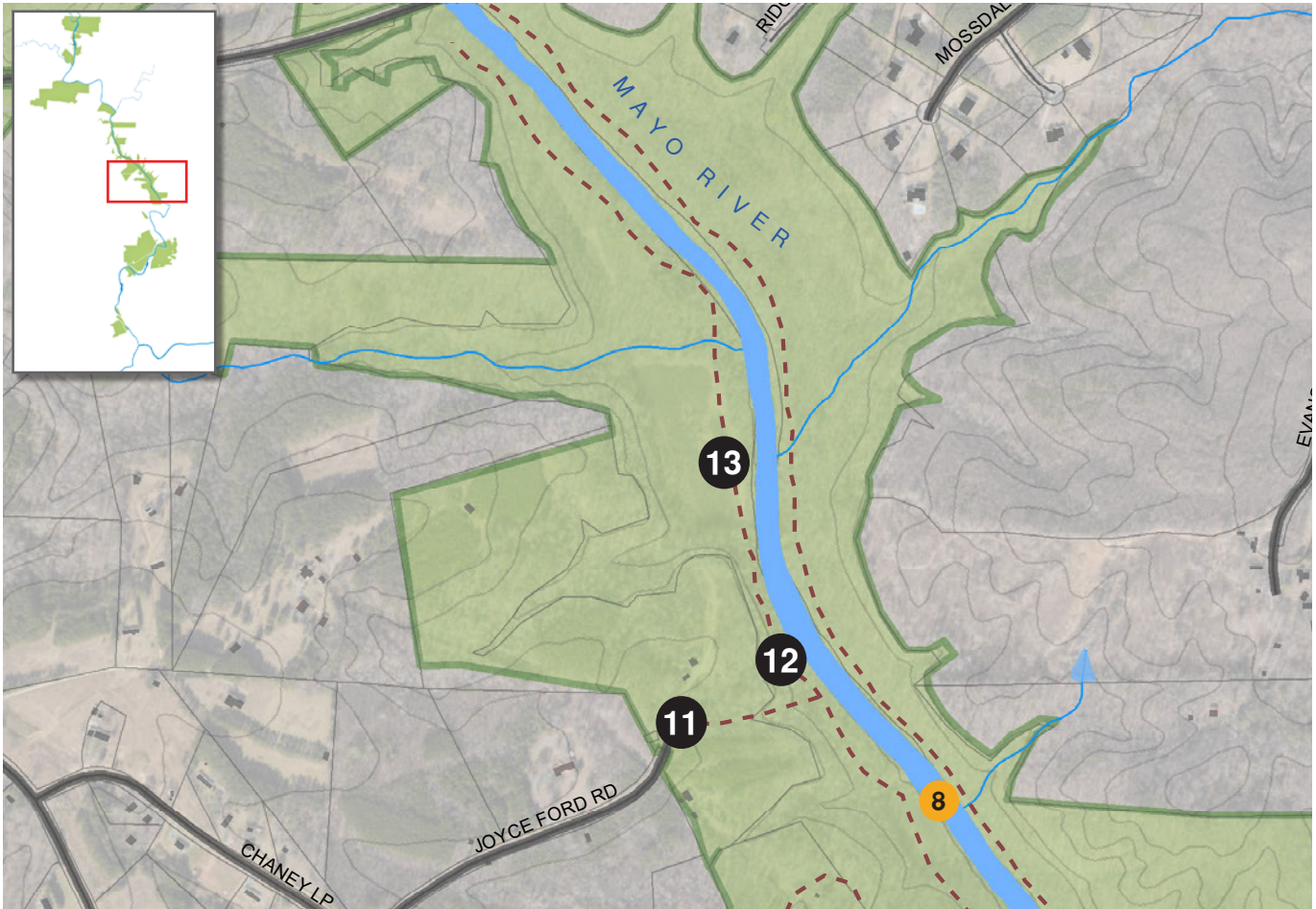
Hickory Creek trailhead is an unimproved trailhead at the end of Tyne Road. From here, hikers can walk down a .75 mile abandoned roadbed to the banks of the Mayo. The small gravel parking area can accommodate about 6 cars. No other facilities are available here.

10 HICKORY CREEK & MAYO RIVER CONFLUENCE

Hickory Creek flows through park property until it joins the Mayo. The banks of the Mayo River and Hickory Creek are protected by an Ecosystem Enhancement Program (EEP) Easement within the boundaries of this Park parcel. The easement restricts any and all development, with the exception of buffer maintenance activities, within 300 feet of the water bodies in perpetuity. Formal river access or access to the creek is prohibited due to the EEP easement.



HICKORY CREEK FLOWS INTO THE MAYO



LEGEND

 MAYO RIVER STATE PARK	 BUILDINGS	 ROADS	 RAILWAY	 SOCIAL TRAILS
---	---	--	---	---

11 JOYCE FORD ROAD ENTRY ACCESS

Joyce Ford Road, south of US 770, dead ends onto park property where a homestead once stood. The land here is relatively flat and open. A former roadbed leads from Joyce Ford Road to the river.

12 JOYCE FORD ROAD RIVER ACCESS

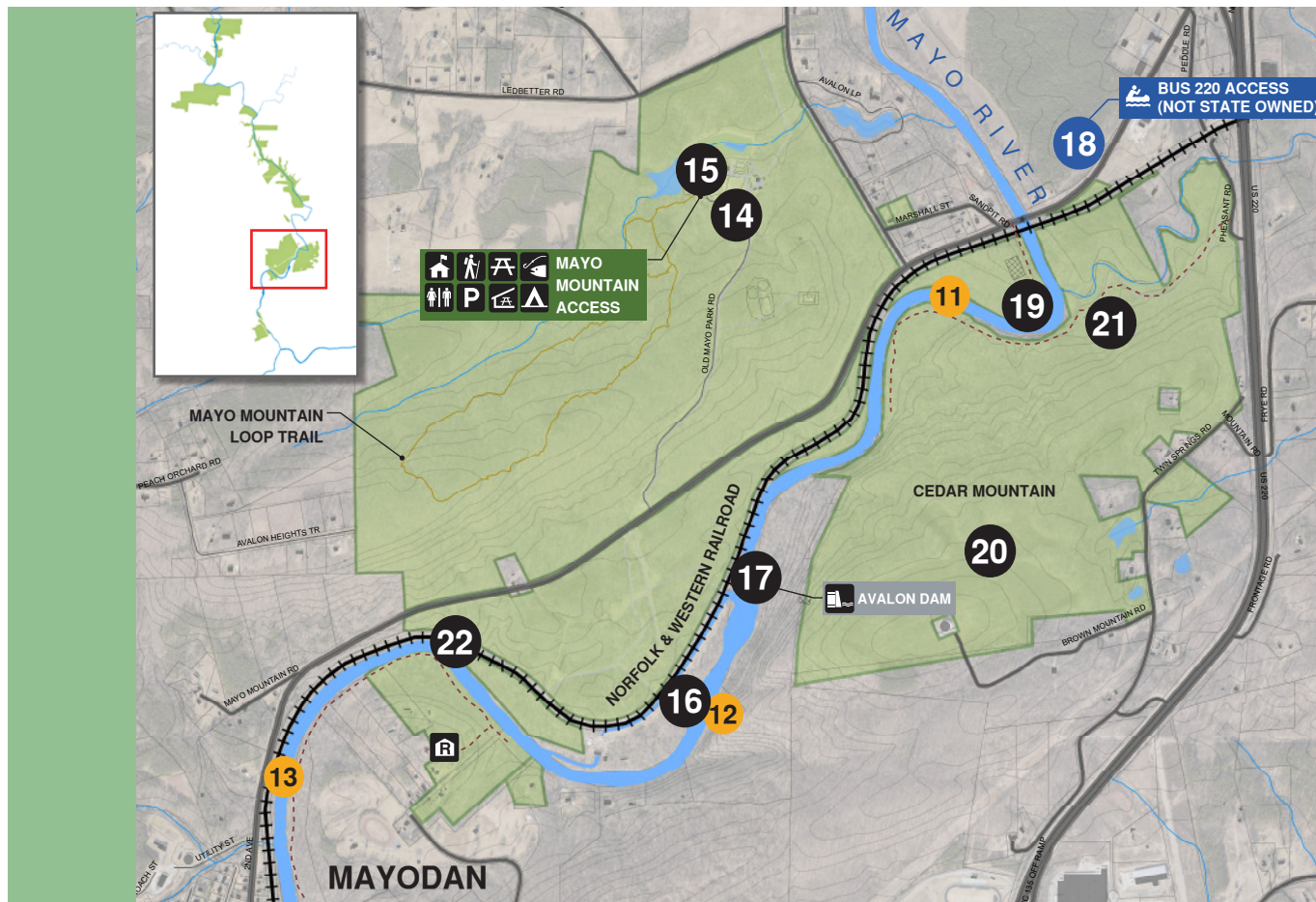
It's a steep decent from Joyce Ford Road to the river, but once at the river a wide swath of land along the water's edge is flat. White sand has washed onto the banks creating a unique landscape.

13 SOCIAL TRAILS

Social trails exist throughout the river corridor; however, they are more plentiful in this section. Many trails are wide enough to accommodate utility vehicles and could be converted to formal trails with little effort. Trails will be evaluated to determine suitability for long-term sustainable trail alignment.



THE MAYO AT THE JOYCE FORD ROAD ACCESS



LEGEND

 MAYO RIVER STATE PARK	 BUILDINGS	 ROADS	 RAILWAY	 TRAILS	 SOCIAL TRAILS
 EXISTING LAUNCH	 EXISTING PARK ACCESS		 CONSTRAINT		

EXISTING CONDITIONS

14 MAYO MOUNTAIN ACCESS AND PICNIC AREA

The Mayo River State Park's current central facility, Mayo Mountain Access, opened to the public on April 1, 2010. Located at the site are a park office/visitor contact station, picnic shelter with grills, three individual picnic pads each with table and grill, restrooms, 0.5-mile loop hiking trail, 1.8-mile loop hiking trail and ponds for fishing. Group camping is also available. There is an NC State Historical Preservation Office historic designation for the area.

15 HISTORIC SHELTER

The original park owner, Washington Mills Company, commissioned renowned architect Antonin Raymond to design the park buildings. Raymond's architectural design was intended to blend with the densely wooded surroundings. The park's picnic shelter has been renovated to ensure visitors can enjoy Raymond's Japanese-style architectural influence for years to come. The column and rafters consist of hickory, the main roof is covered with cedar shingles, and the fireplace is made from local stones. The picnic shelter accommodates up to 100 people and may be reserved.



HISTORIC SHELTER AT MAYO MOUNTAIN ACCESS

16 AVALON MILL SITE

This is where Avalon Mill stood around the turn of the 20th century. The Avalon village was located to the west of the railroad. A fire destroyed the mill in 1911 and the village was eventually abandoned. Mill village structures were relocated to Mayodan.

17 AVALON DAM

Avalon Dam is one of two hydroelectric dams located south of Highway 220 Business bridge. The Avalon Dam was built 2 miles east of Mayodan in 1899 to power operations at the Avalon Mill. The dams are still in operation today, managed by Piedmont Hydro Technologies, LLC, and are a source of renewable electricity generation. There is currently no safe portage around the dam for paddlers.



AVALON DAM

18 BUSINESS 220 RIVER ACCESS

River access is located on private property and is maintained by a partnership including Rockingham County and Dan River Basin Authority. Located beside and to the west of the U.S. 220 Business bridge, this access provides a takeout for paddlers. Paddlers need to exit the river at the bridge because passage is blocked by dams further down river. The approach to the takeout is challenging and existing stairs are prone to sedimentation. A gravel parking area for the river access is located on Town of Stoneville property. There is approximately 6 parking spaces and currently no restroom facilities available. The Division is interested in providing more opportunities for river access on state property in this general location.



SANDY BEACH SOUTH THE BUS 220 ACCESS

19 SANDY BEACH

The broad sandy beach area is located on the southwest side of the Mayo River, just downstream from US 220 Business crossing and railroad bridge. Currently there is no public access to this area.

20 CEDAR MOUNTAIN

Cedar Mountain is a hogback mountain along the Mayo River's east bank opposite the town of Mayodan. The natural area occupies steep NW-facing slopes that overlook the river south of Avalon Dam. The site is one of the few occurrences of the very rare Piedmont Calcareous Cliff community and should be protected. The site has high educational value. It illustrates the relationship of plant communities to underlying soils and geology.



CREEK ON THE NORTH SIDE OF CEDAR MOUNTAIN

21 CEDAR MOUNTAIN (NORTH SIDE)

An unnamed creek flows along the northern side of Cedar Mountain. Easy access from US 220 and an old roadbed that follows the creek create development opportunities for this picturesque creek in the woods.

22 NORFOLK & WESTERN RAILROAD

The Norfolk & Western Railroad was formed in 1881. The railroad is currently still in use transporting freight. The railway creates a barrier for accessing the river in several locations along the Mayo River corridor.



CEDAR MOUNTAIN



EXISTING CONDITIONS



LEGEND

- MAYO RIVER STATE PARK
- BUILDINGS
- ROADS
- RAILWAY
- SOCIAL TRAILS

23 WASHINGTON MILLS DAM

The Mayo Mills company dammed the Mayo River to generate electricity for its textile mill around the turn of the 20th Century. While the mill structure has since been demolished, the dam still exists and produces hydro-electric power. The dam creates a barrier for boating on the river and portage around the dam is unsafe.

24 WASHINGTON MILLS SITE

The site of the former Washington Mill is nearly 18 acres in size. A private site developer purchased the property in 2012 and demolished approximately 95% of the buildings. The debris from demolition is still located on site and the extent of environmental contamination is unknown. The Town of Mayodan acquired the property in late 2016. Currently, the Town is working with the Piedmont Triad and NC Brownfields program to identify strategies to clean up the site.

25 HWY 135 RIVER ACCESS

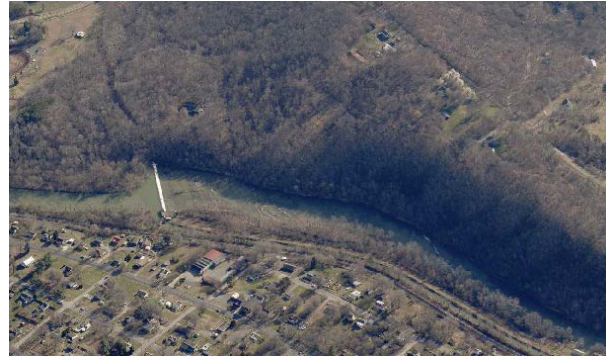
River access is located to the south of NC 135 in Mayodan. There is an existing gravel parking lot that can accommodate several vehicles; however, it is not ADA compliant. It is a short walk from the parking area to the river allowing for easy canoe or kayak launch. Paddlers putting in at the Route 135 Access can continue their journey to the Dan River confluence and beyond. The 704 access is located less than a mile upstream of the confluence. The Settlers Bridge Access is the next available access downstream on the Dan river and is a much longer 8-mile journey. An interim access may provide opportunity for tubers looking for a shorter trip.

26 SALEM-PETERSBURG ROAD SITE

Remnants of the old Salem-Petersburg wagon road can be seen in this area of the park. There is an existing tunnel under the railroad.

27 DAN VALLEY ROAD BRIDGE

This is the last bridge to cross the Mayo River before it joins with the Dan River. Piers from the previous stone bridge still remain on the banks of the river.



AERIAL VIEW OF WASHINGTON MILLS DAM



HISTORIC PHOTO OF WASHINGTON MILL



FORMER WASHINGTON MILL SITE



HWY 135 BRIDGE



VIEW FROM CEDAR MOUNTAIN

The Mayo River is home to a diverse ecology, including vegetation and animals, and protection of the river should be an important part of the master plan. The water is noted for its lack of contaminants and is home to rare and endangered species. The vegetation along the corridor and in the areas surrounding the park have been documented and analyzed by Natural Resources staff.

The forest types surrounding the park, while mostly common to the area, are important to note as they may lend clues to the health of the ecosystem and the presence of habitat for rare and endangered species. Notably, the river is home to the basic mesic forest, which is often rare and are home to endangered species. Ten rare plant species as well as ten or more species on the NC Natural Heritage Program Watch List occur in Basic Mesic Forests throughout the Piedmont.

Protection and conservation of the various forest types is critical to protecting the health of the river corridor. Ensuring the health of the forest types will reduce erosion and sedimentation, filter stormwater runoff and maintain the habitat for sensitive species.

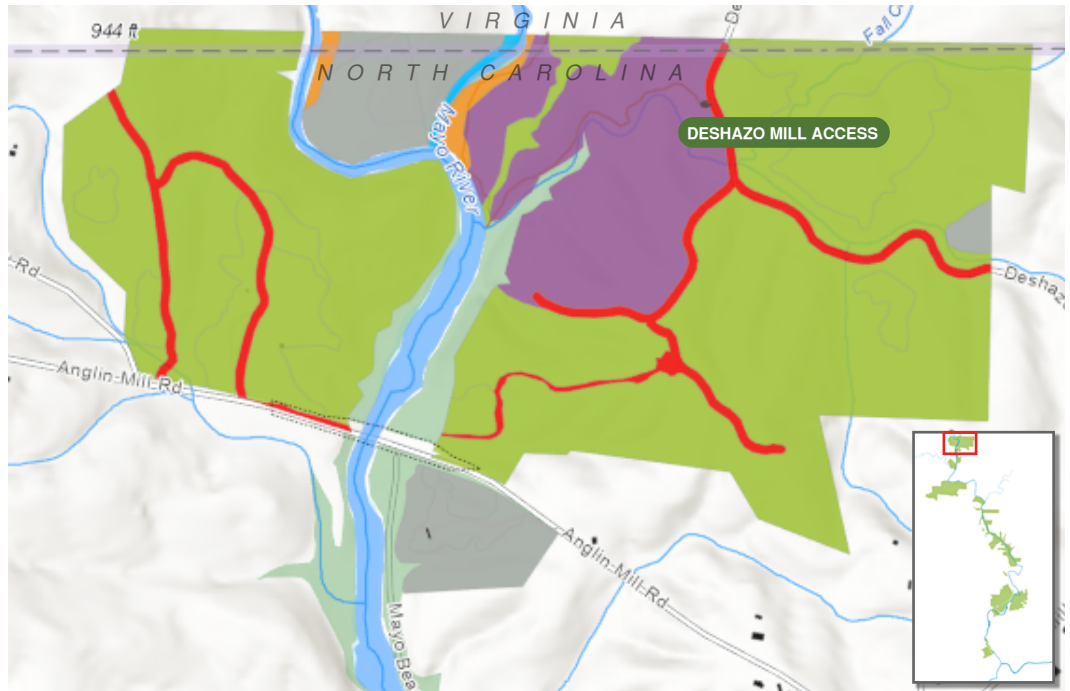
The following maps illustrate existing vegetation and natural communities within Mayo River State Park and detailed forest type definitions can be found in the Appendix.



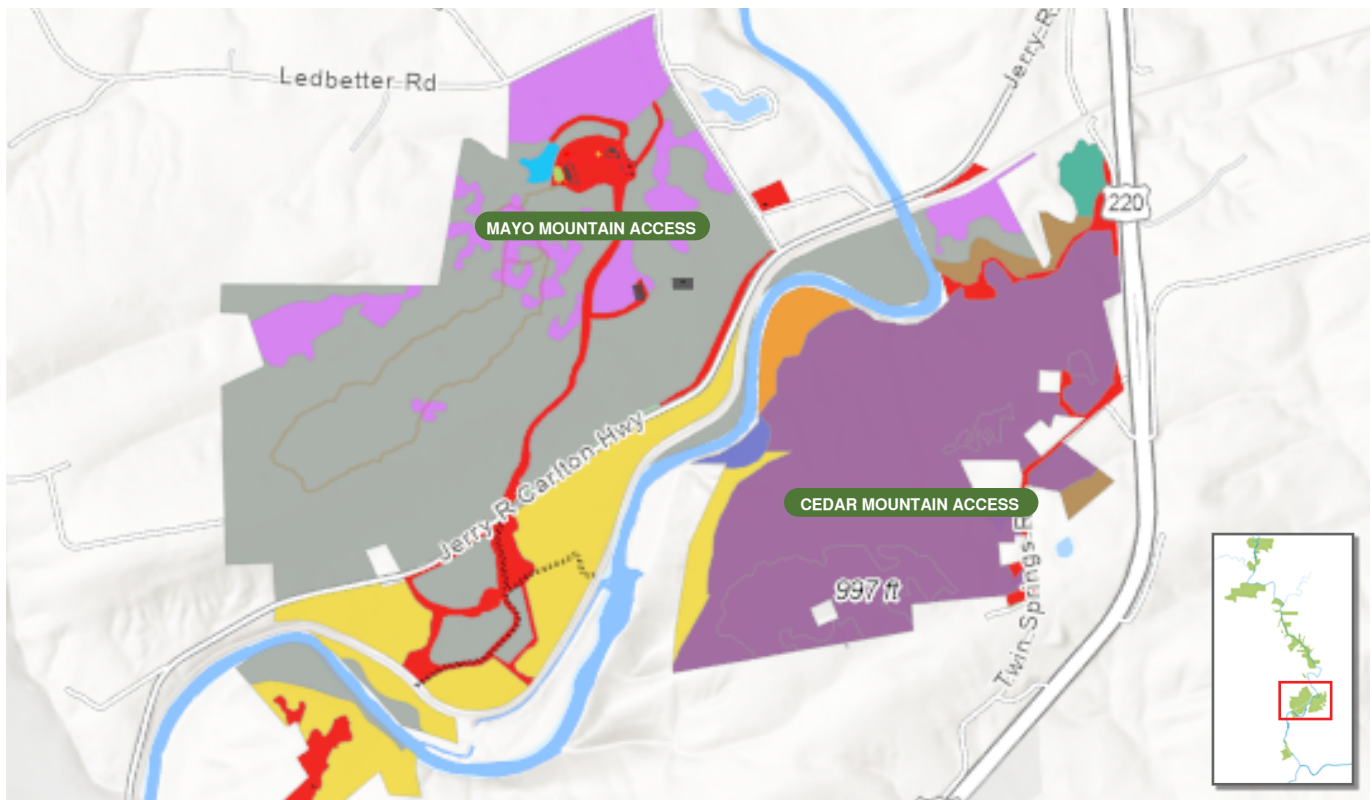
SMALL CREEK JOINING THE MAYO RIVER

LEGEND

- Dry-Mesic Oak - Hickory Forest (Piedmont Subtype)
- Previously Disturbed
- Basic Mesic Forest (Piedmont Subtype)
- Mesic Mixed Hardwood Forest (Piedmont Subtype)
- Piedmont Levee Forest (Typic Subtype)
- Dry Basic Oak-Hickory Forest
- Open Water
- Piedmont Alluvial Forest
- Dry-Mesic Oak-Hickory Forest (Piedmont Subtype)
- Piedmont Basic Glade (Typic Subtype)
- Other



DESHAZO MILL ACCESS VEGETATION MAP



MAYO MOUNTAIN AND CEDAR MOUNTAIN ACCESS VEGETATION MAP



RARE, THREATENED AND ENDANGERED SPECIES ALONG THE MAYO RIVER CORRIDOR

DATABASES REVIEW

Timmons Group completed a database review of protected and rare species for the Mayo River project site utilizing the site boundary and a 1-mile radius.

Databases reviewed included:

- US Fish & Wildlife Service Information Planning and Conservation (IPaC) database (Raleigh, Asheville, Virginia)
- NC Department of Natural and Cultural Resources, Natural Heritage Program (NCNHP) database

RARE & ENDANGERED SPECIES

The results of this review indicated known occurrences of numerous rare, threatened and endangered species within the project area:

Aquatic federally endangered species:

- James spiny mussel (*Pleurobema collina*)
- Roanoke logperch (*Percina rex*)

Terrestrial federally endangered species:

- Smooth coneflower (*Echinacea laevigata*)

Terrestrial threatened & endangered species (NC):

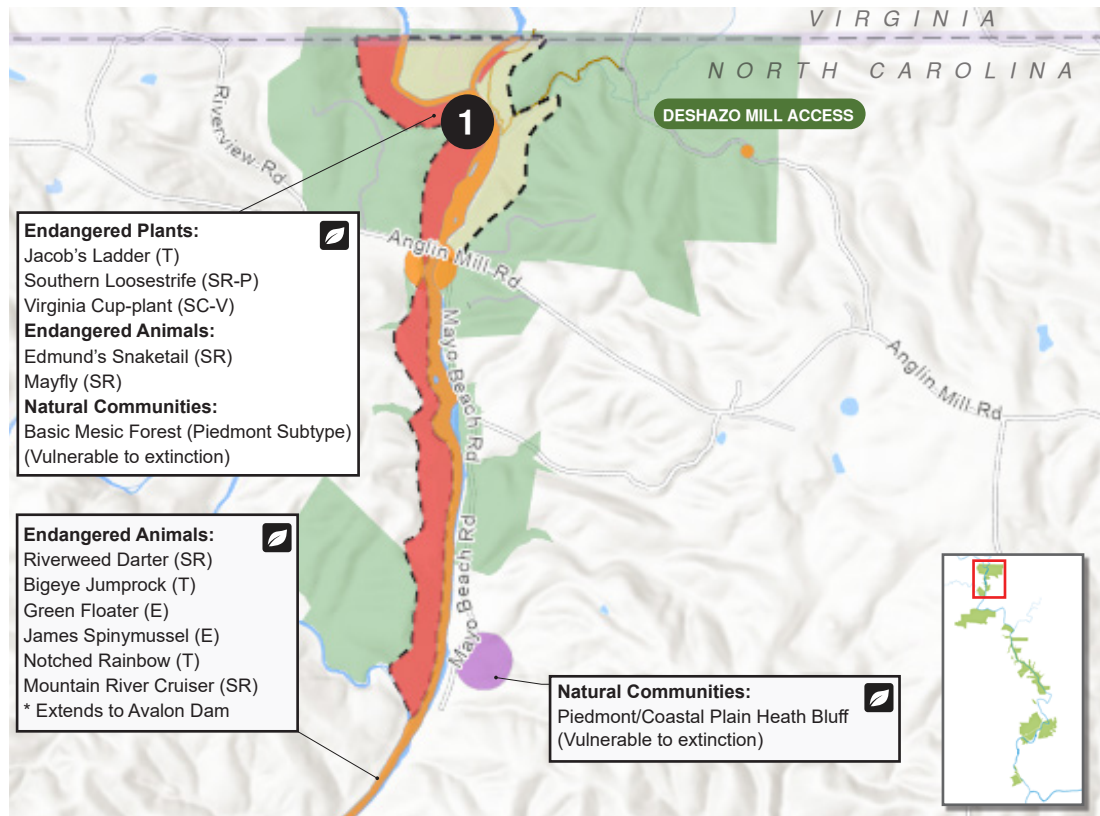
- Glade Bluecurls (*Trichostema brachiatum*)
- Jacob's Ladder (*Polemonium reptans* var. *reptans*)

Terrestrial special concern species (NC):

- Four-toed Salamander (*Hemidactylium scutatum*)
- Mole Salamander (*Ambystoma talpoideum*)

LEGEND**Mayo Mountain State Park****Natural Areas**

Natural Areas from the NC Natural Heritage Program that are of special biodiversity significance, due to the presence of rare species, exemplary natural communities, or important animal assemblages.

Endangered Plants**Endangered Animals****Natural Communities****E** = Endangered**T** = Threatened**SR** = Significantly Rare**ST** = Significantly Threatened**SC** = Special Concern**SR-P** = Significantly Rare - Peripheral**SC-V** = Special Concern-Vulnerable

DESHAHO MILL ACCESS VEGETATION MAP

NATURAL AREAS

Five (5) significant natural communities/natural areas were identified within the project site:

- Mayo River Anglin Mill Bluffs
- Cedar Mountain
- Mayodan Bluffs
- Mayo River Aquatic Habitat
- Dan River Aquatic Habitat

Natural areas are defined by the NC Natural Heritage Program to be of special biodiversity significance, due to the presence of rare species, exemplary natural communities, or important animal assemblages.

It appears that the majority of these areas are already located within managed conservation areas (including the existing boundaries of Mayo River State Park) but there are some areas which appear outside of these conservation limits.

1**Mayo River Anglin Mill Bluffs**

Site includes the floodplain and adjacent slopes along the Mayo River near Anglin Mill Road (SR 1358). It extends upstream along both the east and west bank of the river to Virginia and downstream along the west bank to Buffalo Creek. Generally, steep slopes (60-100 ft.) border the Mayo River. The more mesic slopes on the west bank of the Mayo (and South Mayo north of the confluence) support Mesic Mixed Hardwood Forest.

On the steeper slopes where undisturbed by recent logging, the forest is mature with a mixed, uneven-aged canopy. Tulip tree (*Liriodendron tulipifera*) is normally present and is often the dominant canopy tree. Some areas are dominated by Beech (*Fagus grandifolia*), and various Oaks (*Quercus* spp.) occur throughout including red oak, white oak and swamp red oak. The largest trees are 30-35" Diameter Breast Height (DBH); many are 10-20" DBH. The understory is open with few shrubs or vines.



LEGEND

Mayo Mountain State Park

Natural Areas

Natural Areas from the NC Natural Heritage Program that are of special biodiversity significance, due to the presence of rare species, exemplary natural communities, or important animal assemblages.

Endangered Plants

Endangered Animals

Natural Communities

E = Endangered

T = Threatened

SR = Significantly Rare

ST = Significantly Threatened

SC = Special Concern

SR-D = Significantly Rare - Disjunct

SR-P = Significantly Rare - Peripheral

SC-V = Special Concern-Vulnerable

Endangered Animals:
Carolina Ladle Crayfish (SR)
Elm-leaf Goldenrod (SR-D)
Virginia Stickseed (SR-P)
Other sensitive species

Endangered Animals:
Roanoke Logperch (E)
Bigeye Jumprock (T)
Riverweed Darter (SR)
Roanoke Bass (SR)
Green Floater (E)

Endangered Plants:

Virginia Cup-plant (SC-V)

Natural Communities:

Piedmont Levee Forest (Typic Subtype)
(Vulnerable to extinction)

Endangered Plants:

Cliff Stonecrop (SR-P),

Natural Communities:

Piedmont Levee Forest (Typic Subtype)
(Vulnerable to extinction)

Dry Basic Oak-Hickory Forest

(Imperiled/ Vulnerable to extinction)

Piedmont Basic Glade (Typic Subtype)

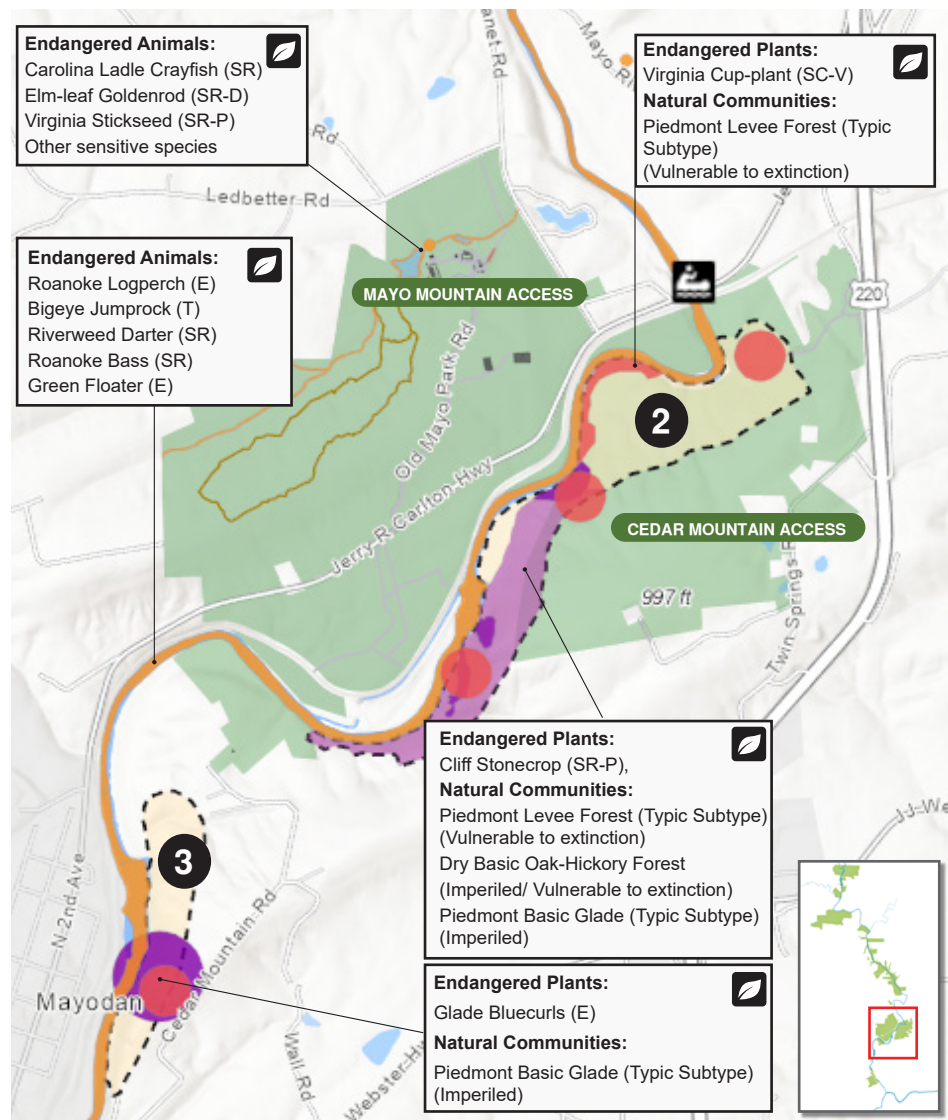
(Imperiled)

Endangered Plants:

Glade Bluecurls (E)

Natural Communities:

Piedmont Basic Glade (Typic Subtype)
(Imperiled)



MAYO MOUNTAIN AND CEDAR MOUNTAIN ACCESS NATURAL RESOURCES MAP



CLIFF STONECROP (SR-P)
SEDUM GLAUCOPHYLLUM



VIRGINIA CUP-PLANT (SC-V)
SILPHIUM CONNATUM



GLADE BLUECURLS (E)
TRICHOSTEMA BRACHIATUM

2 Cedar Mountain Natural Area

The site is on a northwest-facing bluff of a hogback mountain in the Dan River Triassic Basin. It is the only known natural exposure of steeply dipping sandstone and siltstone in the state. This unusual geology produces soils that support an unusual combination of basophilic and acidophilic species. A good quality Piedmont Calcareous cliff, one of the rarest natural communities in the state, overlooks the Mayo River.



VIEW OF CEDAR MOUNTAIN

3 Mayodan Bluffs Natural Area

Located along the east side of the Mayo River, just north of NC 135 and west of SR 2168, overlooking the town of Mayodan. The site includes the southwest edge of a hogback mountain. A steep slope runs from the ridge 200 feet down to the Mayo River. In several places, large exposed rocks form the cliff face. Elsewhere the soil is largely composed of a crumbly shale. The site is one of a few known examples of Piedmont Calcareous Cliff in the state. Slope varies but is primarily 35 degrees or more making the cliff difficult to traverse and susceptible to damage from foot-traffic.



ROCK OVERLOOK AT CEDAR MOUNTAIN



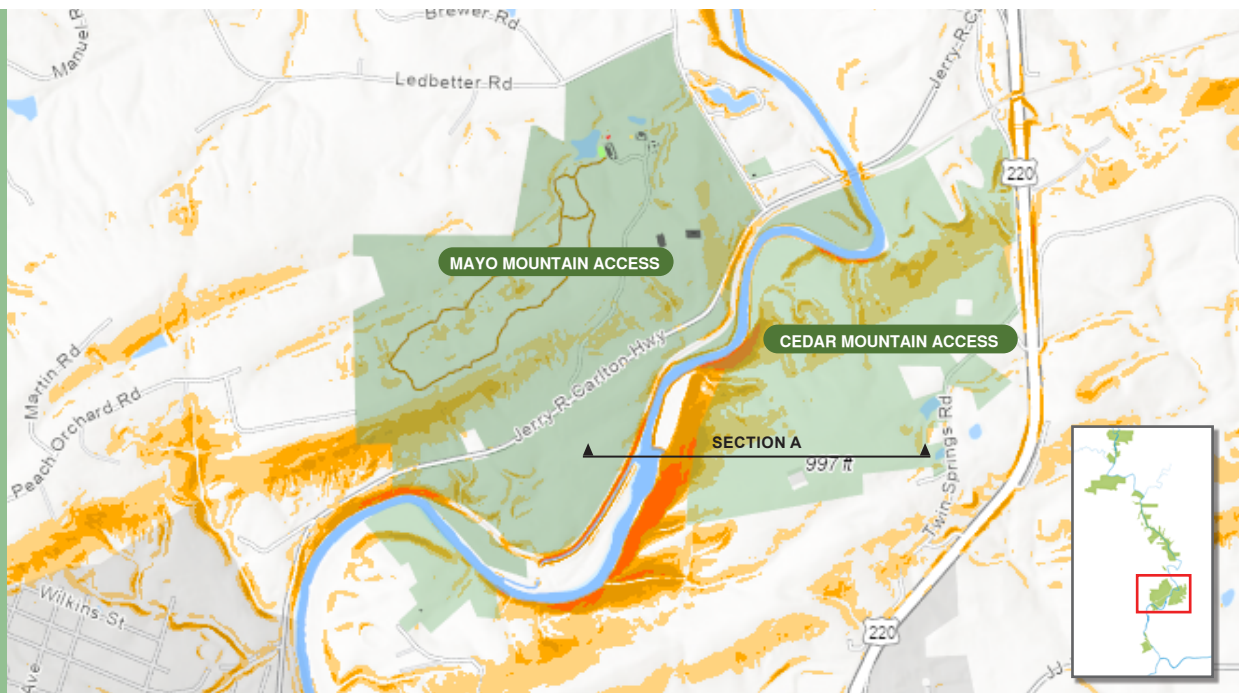
SMOOTH CONEFLOWER (E)
ECHINACEA LAEVIGATA



JACOB'S LADDER (T)
POLEMONIUM CAERULEUM



SOUTHERN LOOSESTRIFE (SR-P)
LYSIMACHIA TONSA

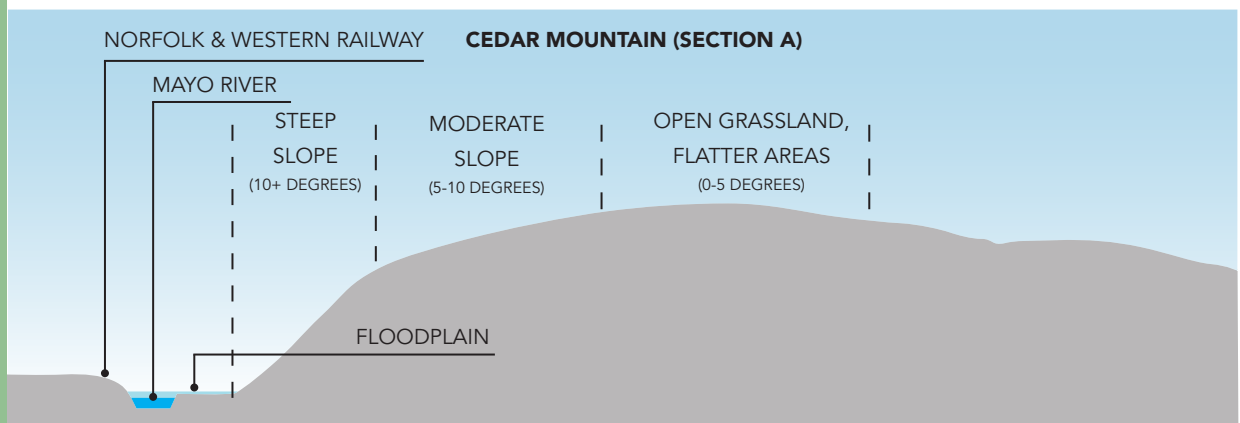
**SLOPES (DEGREES)**

Slope is how planners measure the terrain or topography of an area, which helps us determine areas that might be able to be developed. Flatter areas, between 0 to 5 degrees, are more conducive to improvements, such as campsites, day use areas, structures, parking areas and trails. Improvements can happen on slightly steeper slopes (5-10 degrees), but more care is required during the planning and development process. Slopes above 10 degrees tend to be more sensitive areas that are vulnerable to erosion and should be protected.

CEDAR MOUNTAIN

Cedar Mountain is a large hogback ridge with steep west facing slopes running down to the river. This sheer face makes it almost impossible to hike on this side of the river along this edge.

Flat areas adjacent to the river within the Mayo River State Park property boundaries are prone to inundation. These low lying flat areas are often located within the flood plain and present limited opportunities for development.



CEDAR MOUNTAIN - CROSS SECTION A



STEEP TERRAIN ADJACENT TO THE RIVER CORRIDOR

DESHAZO MILL ACCESS

The topography becomes more undulating towards the north end of the Mayo River corridor. Steep areas can be seen throughout most of the Deshazo Mill property. Drainage Lines running into Fall Creek, Pawpaw Creek and Hickory Creek have carved out steep embankments along the river.



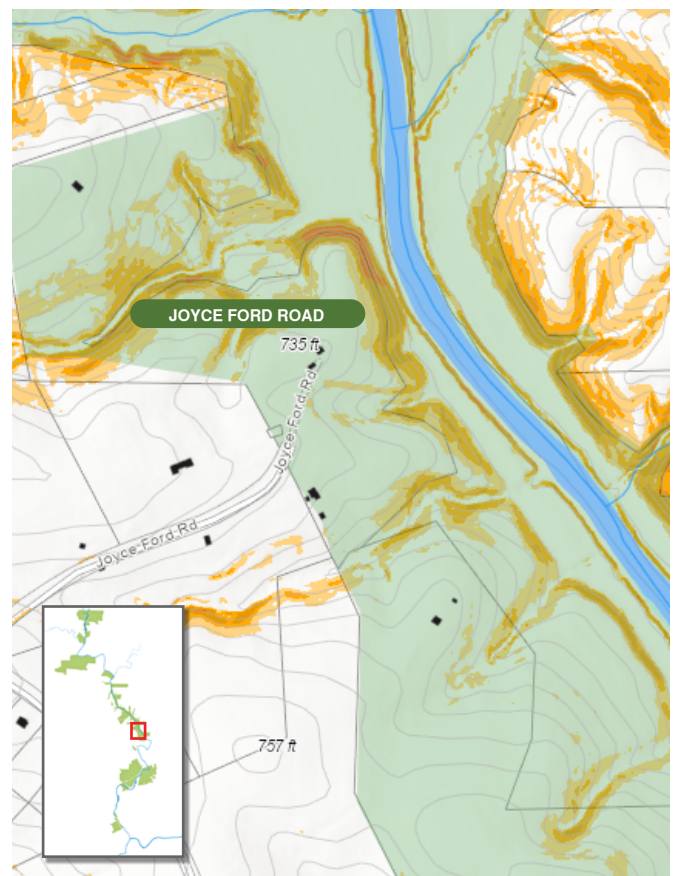
MAP SHOWING SLOPES OF DESHAZO MILL AREA



FLAT BENCH ALONG THE STEEP BANKS AT JOYCE FORD RD.

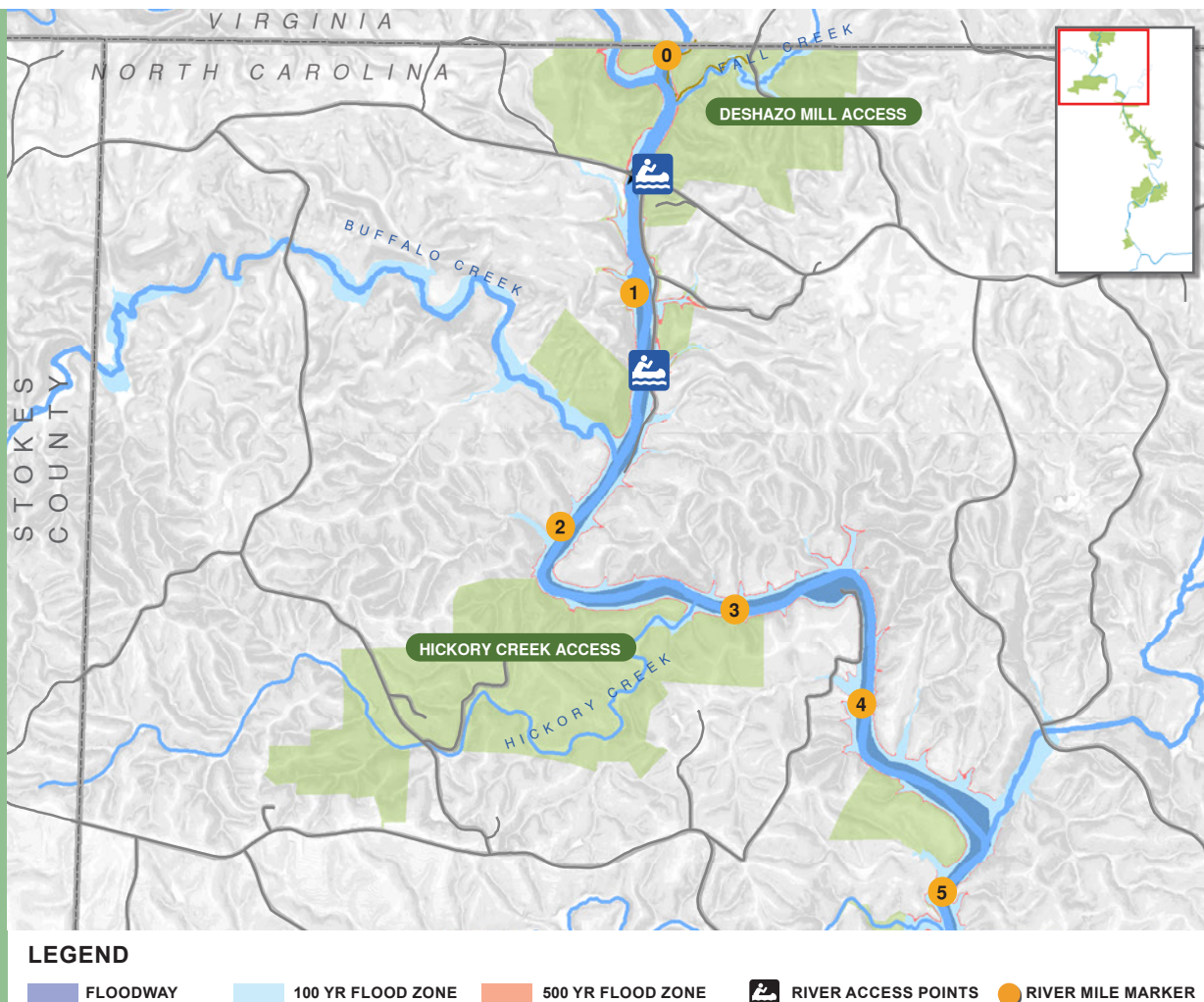
JOYCE FORD ROAD AREA

The Joyce Ford Road access drive is located at the top of a steep slope. Closer towards the river, a flat shoulder meets a steep drop off at the river bank. Social trails occupy these flat areas along both sides of the river for much of this section of the corridor.



MAP SHOWING SLOPES OF JOYCE FORD ROAD AREA

NATURAL RESOURCES / HYDROLOGY



Hydrology maps identify the creeks and streams that feed the Mayo, as well as the floodplains and known wetland areas along the corridor. In big rain events, the Mayo will overtop its banks in several areas, flooding the surrounding land and depositing sediment. Flood prone areas are typically unsuitable for development, but can provide habitat for fragile plant and animal species.

The Mayo River is broad and winding with shallow riffles and deep pools. Because of limited development along the corridor from Business 220 to the Virginia State line, wide wooded buffers extend along most of the stream reach. The forested buffers, rock out crops and woody vegetation establishment on the banks contribute

to overall bank stability. Active erosion was primarily observed in high stress areas such as the outside of bends in the river.

The overall form of the river is stable with minimal lateral migration. The river's capacity to carry flood flows during storm events and access to its broad floodplain was evident in the sandy soil deposits found along the reach. The river supports many aquatic and terrestrial species. The tree lined riverbanks aid in providing shade for fish and amphibians. Tree roots and rock outcrops are a source of habitat for aquatic life along the river's edge.

FEMA REGULATIONS

The Mayo River is a Federal Emergency Management Access (FEMA) regulated stream that is defined as a detailed study, Mayo River Upper, with mapped floodplain and floodway limits above US 770; a limited detailed study, Mayo River Limited Detail, with a mapped floodplain and modeled non-encroachment area to the Avalon Dam; and a detailed study, Mayo River Lower below the Avalon Dam within the study corridor.

The Deshazo Mill access and the Mayo Beach day use area are both located in the Mayo River Upper portion of the river with regulated floodplain and floodway limits. Accesses to the river that includes Joyce Ford Road, Mayo Mountain, Cedar Mountain, and the Avalon day use are all located in the Mayo River Limited Detail area with a regulated floodplain and non-encroachment area.

Access sites below the Washington Mills Dam on the Mayo River Lower portion of the river with regulated floodplain and floodway limits include Washington Mills, Madison Town, Highway 135, and N. Water Street. Many of the tributaries that connect with the Mayo River are also regulated by FEMA. The Deshazo Mill access includes FEMA regulated Fall Creek and an Unnamed Tributary (UT) to Fall Creek. Mayo River Tributary 26 is located in the Mayo River Day Use and Lower Beach access area. The Cedar Mountain access area is additionally crossed by FEMA regulated Mayo River Tributary 3.



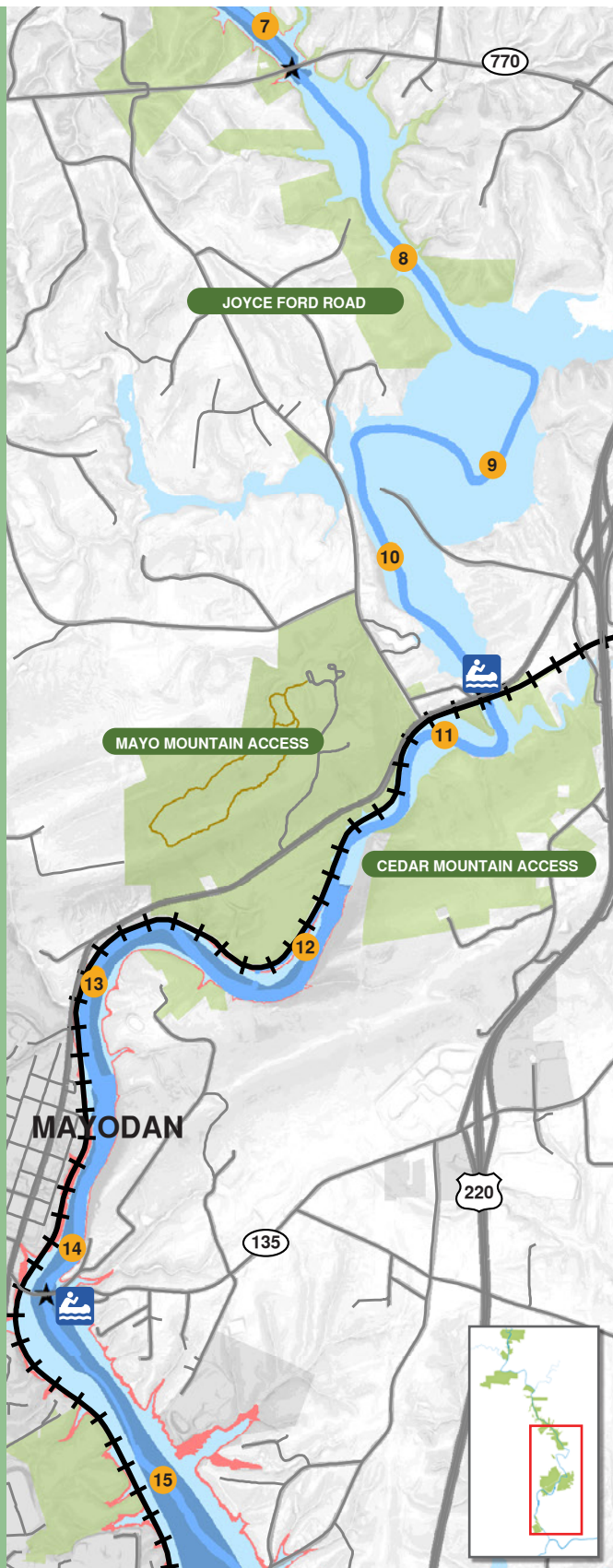
US 770 BRIDGE



FLOOD LEVEL WATERS DEPOSIT DEBRIS AT THE HIGHWAY 135 ACCESS



ROAD WASHOUT AT MAYO BEACH DUE TO FLOODING



DEFINITIONS

Flood zones are geographic areas that the Federal Emergency Management Agency (FEMA) has defined according to varying levels of flood risk. Each zone reflects the severity or type of flooding in the area.

Floodway: The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. Communities must regulate development in these floodways to ensure that there are no increases in upstream flood elevations.

Non-Encroachment Area: The portion of a floodplain where construction, placement of fill, or similar alteration of topography may be prohibited by a community due to the effects such development would have on the conveyance of discharge.

100 Year Flood Zone (Zone AE): An area inundated by 1% annual chance flooding. Also referred to as the base flood or 100-year flood.

500 Year Flood Zone (Zone X-500): Area of moderate flood hazard or 0.2% annual chance of flooding, usually the area between the limits of the 100-year and 500-year flood plains.

CREEK
R FALL



P



DESHAZO MILL
ACCESS



OVERLOOK

DESHAZO MILL RD



GROUP CAMPING
2 SITES
(FUTURE EXPANSION)

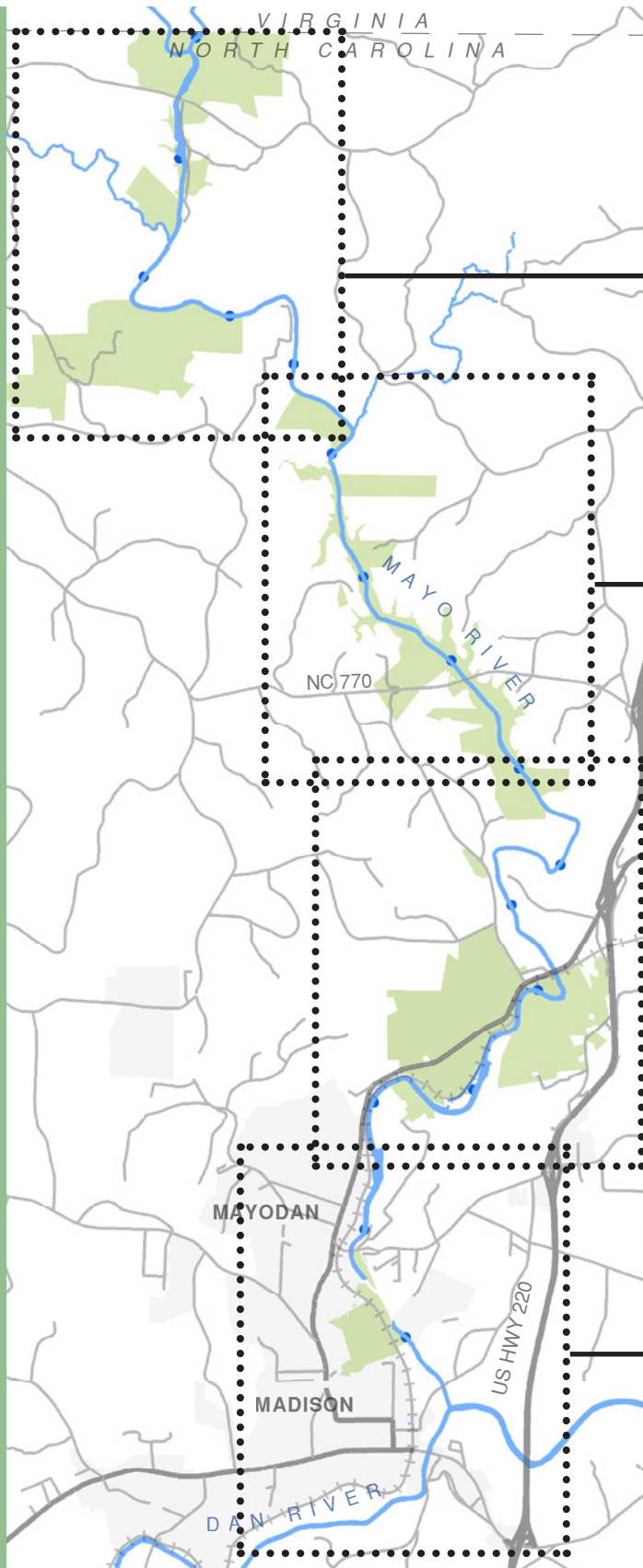


5 RECOMMENDATIONS

MAYO RIVER STATE PARK MASTER PLAN

The map illustrates the Mayo River area, showing the river, trails, and various landmarks. Key features include the Mayo River, River Trail, Drop Off Location, Water Treatment Facility, Parking, Trail Spaces, Trail Trailer, Trailer, Floodplain, State Route 100, Vehicular Bridge, Enclosed Species in the Santa Barbara Volcanic Climate Zone, Camp, Campfire, Trails, Two Way Road Access from the Adjacent, and Draft Trail Design (Potential Baylon Dam). The map also shows a Draft Trail Design (Potential Baylon Dam) and a Draft Trail Design (Potential Baylon Dam).

KEY MAP



The Mayo River corridor was divided into four focus areas, each offering unique opportunities for protection, access and development. The development opportunities and constraints maps that informed the final recommendations can be found in the Appendix.

DESHAZO MILL ACCESS AREA

This area includes Deshazo Mill Access and Mayo Beach Access. These two areas are two of the most popular parts of the park and improvements are needed to accommodate increases in visitorship. Aside from these areas, this is a largely undeveloped section of the corridor and presents numerous opportunities for recreation as well as environmental protection.

HWY 770 AREA

This section includes the Joyce Ford Road access, which has extensive river frontage, as well as several smaller park parcels. Continuous state-owned river frontage connects the parcels on both sides of the river, allowing for opportunities to formalize river access along this section of the corridor. However, access to the park parcels is limited in many cases with some accessed via easements on private property or through established neighborhoods. Private family cemeteries can be found throughout this section.

MAYO MOUNTAIN ACCESS AREA

This area is the current central access for the park. It includes Mayo Mountain Access and Cedar Mountain. It is also the historic center of the park with strong ties to the community.

MAYODAN-MADISON ACCESS AREA

This area runs from Washington Dam to the confluence of the Dan River. There is currently only river access at Highway 135.



PRIORITIES AND PHASING

Implementation of the master plan will happen in manageable phases over time. Through conversations with Park Staff and the Stakeholder committee, priorities for immediate and future projects were identified. Park Staff are uniquely positioned to understand how the Park is currently being used as well as identifying yearly trends. Areas of the park that are already gaining large quantities of visitors are of the highest priority for initial improvements. Larger recreation experiences, such as camping, will require upgrades to staff facilities to handle the expected increased attendance.

Priorities for park improvements have been divided into four phases:

1. Improving existing access at popular areas, Mayo Beach and Deshazo Mill.



2. Adding a new contact station at Mayo Mountain Access, additional staffing and improved support facilities. Trails and river access improvements across the entire corridor.

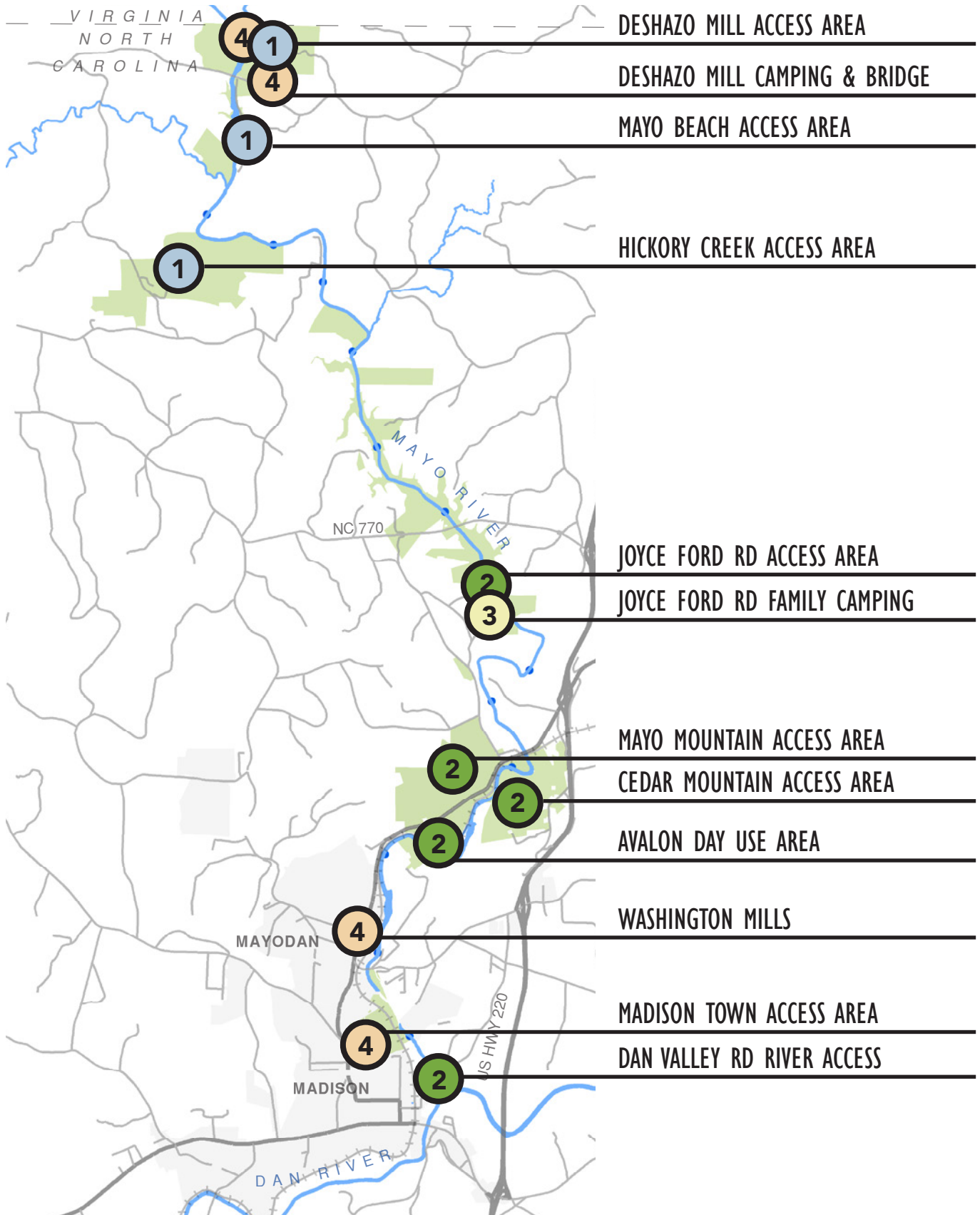


3. Creating a central camping hub with access to the river.



4. Additional camping and support facilities at the northern section of the corridor.







Ongoing improvements:



THE RIVER TRAIL

In addition to these distinct phases, the development of a river trail stretching from the Virginia border to the Dan River Confluence will be implemented as land is acquired along the river corridor, funding becomes available and protection of the environmental resources can be assured. The connectivity of parcels along the corridor will also be critical to the protection of sensitive natural areas which provide habit to several endangered species identified in the master plan report.



HISTORICAL INTERPRETATION

The Mayo Mountain access is recognized as a historically significant area by NCSHPO and proposed improvements aim to preserve and celebrate the story of the park and the Mayodan community that it belongs to. The Avalon property holds a special place in the history of Mayodan and the community. The proposed day use area at the site of the old Avalon village will include interpretive signage of the Village and Mill.



ECOLOGICAL PRESERVATION

The master plan has identified several recreation hubs along the river corridor for development. The remaining park property is to be managed and protected. The Landscape Protection Plan will continue to identify high priority property along the river corridor.



OPPORTUNITIES FOR PARTNERSHIP

The plan has identified multiple opportunities for the Division to partner and collaborate with local municipalities to provide improved recreation facilities. The Mayo River is integral to the towns of Mayodan and Madison and the Division is committed to providing safe and accessible opportunities to engage the local community with the river and the proposed trail network.



STAFFING

The Division will need to increase its park staffing as park programming and access grows in order to ensure the new features can be maintained and managed in a safe and efficient manner with various access areas along a linear park.

PROJECTED TIMELINE (YEARS)

NEAR TERM (0-5)

MID TERM (5-10)

LONG TERM (10 -15)

15+

1. IMPROVING EXISTING ACCESS

There is an immediate need to improve parking access, sanitary facilities and signage at existing popular areas, namely the Deshazo Mill Trailhead and the Mayo Beach Access. Providing vault toilets and improving the existing trail network in these areas are manageable first steps in improving park facilities and will have a positive impact on the visitor experience. A proposed pedestrian bridge over Fall Creek along with trail connections between Deshazo Falls and Mayo Beach will connect these areas and create a rich experience.

SITE	KEY FEATURES
Deshazo Mill Access	Trails, Parking, Signage, Footbridge Connection (Fall Creek)
Mayo Beach Access	Restroom, Parking, River Access
Hickory Creek	Trails, Parking

2. CONTACT STATION, STAFFING, FACILITIES & TRAILS

Before further improvements and expansion of the park's current facilities can occur, operational upgrades will need to be made. It is expected that in order to meet the recommendations of the plan additional staff and office space will be required. The plan proposes a new contact station located at the Mayo Mountain Access. The contact station would provide a location for visitors to get park information, and meeting areas and office space for staff. In addition, upgraded maintenance facilities are a high priority as park access and visitation grows.

SITE	KEY FEATURES
Mayo Mountain Access	Contact Station, Landscape Improvements
Joyce Ford Rd	River Access, Trails, Parking, River Camping, Day Use
Nickel Plate Rd	Staff Residence
Cedar Mountain	Trails, River Access, Parking
Avalon Day Use Area	Picnic, Trails, Parking, Educational Signage, Maintenance
Dan Valley Rd	River Access, Parking

3. CAMPING, RIVER ACCESS: PART 1

Camping is strongly desired by both the community and the stakeholder group. A camping hub at the Joyce Ford Road property is located centrally on the river corridor and offers river access. Plans for this area show the final build out of the campground, which includes river camping, family camping and RV camping. Camp sites may be implemented in phases as the park gains popularity. Camping with river access will be an economic draw for the area.

SITE	KEY FEATURES
Joyce Ford Rd	Family Camping

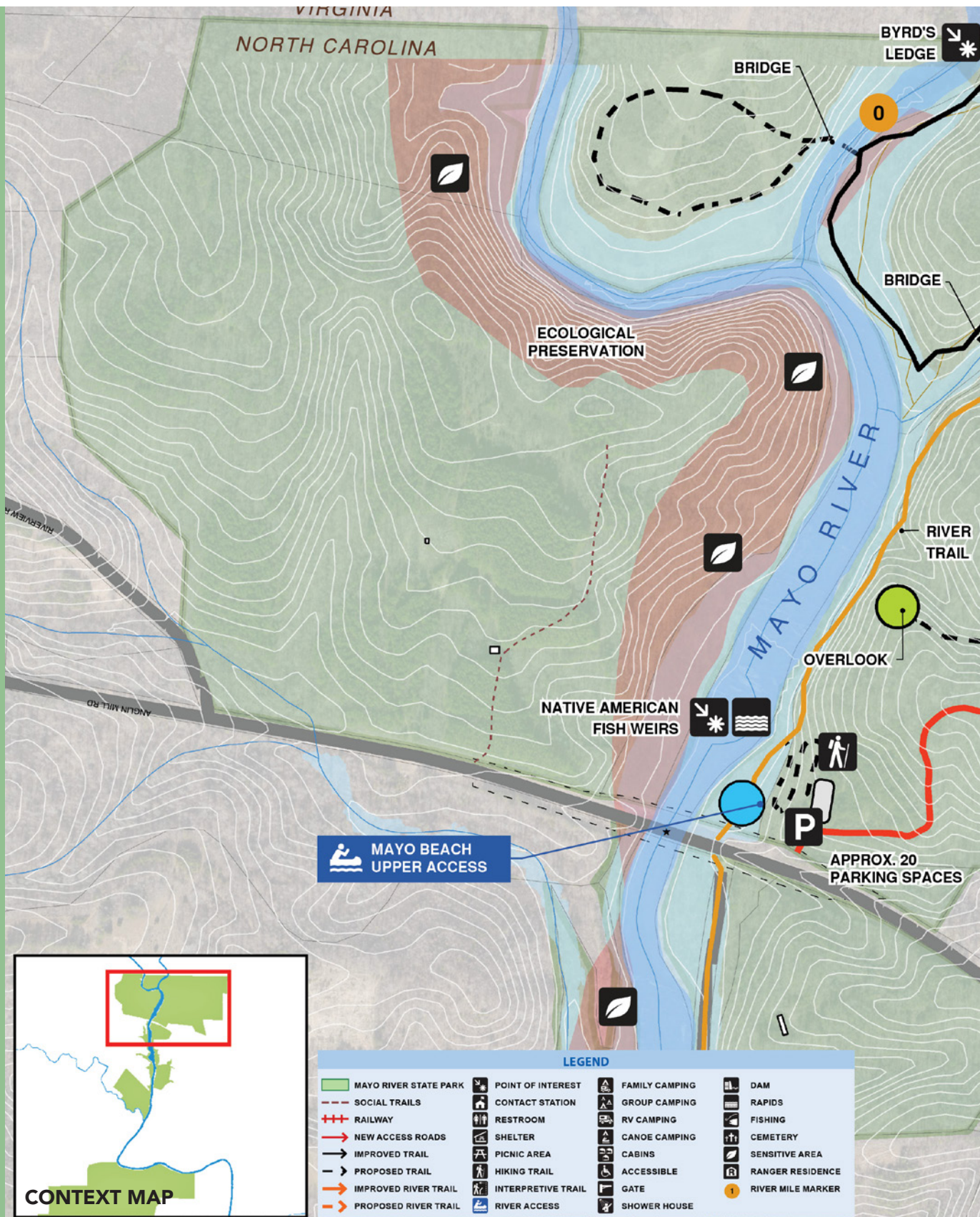
4. ADDITIONAL CAMPING, TRAILS, RIVER ACCESS: PART 2

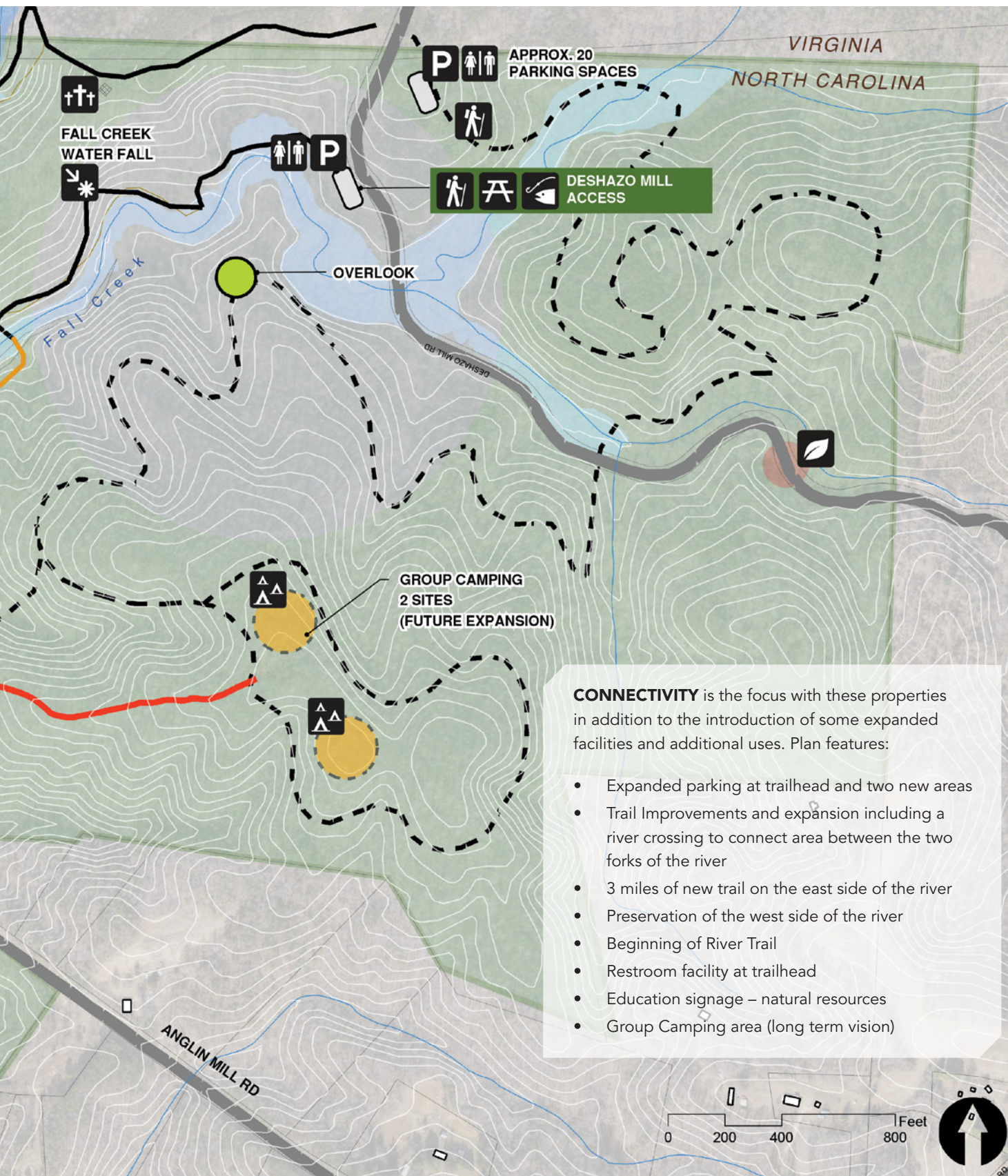
As the Park gains more visibility through steady infrastructure improvements, larger gestures such as camping in Deshazo Mill and larger river access projects at Washington Mills & Cedar Mountain can occur.

SITE	KEY FEATURES
Deshazo Mill Access	Camping, Bridge (Mayo River North Fork Crossing)
Washington Mills	River Access, Parking, Historical Interpretation
Madison Town Access	Accessible Trails, Parking

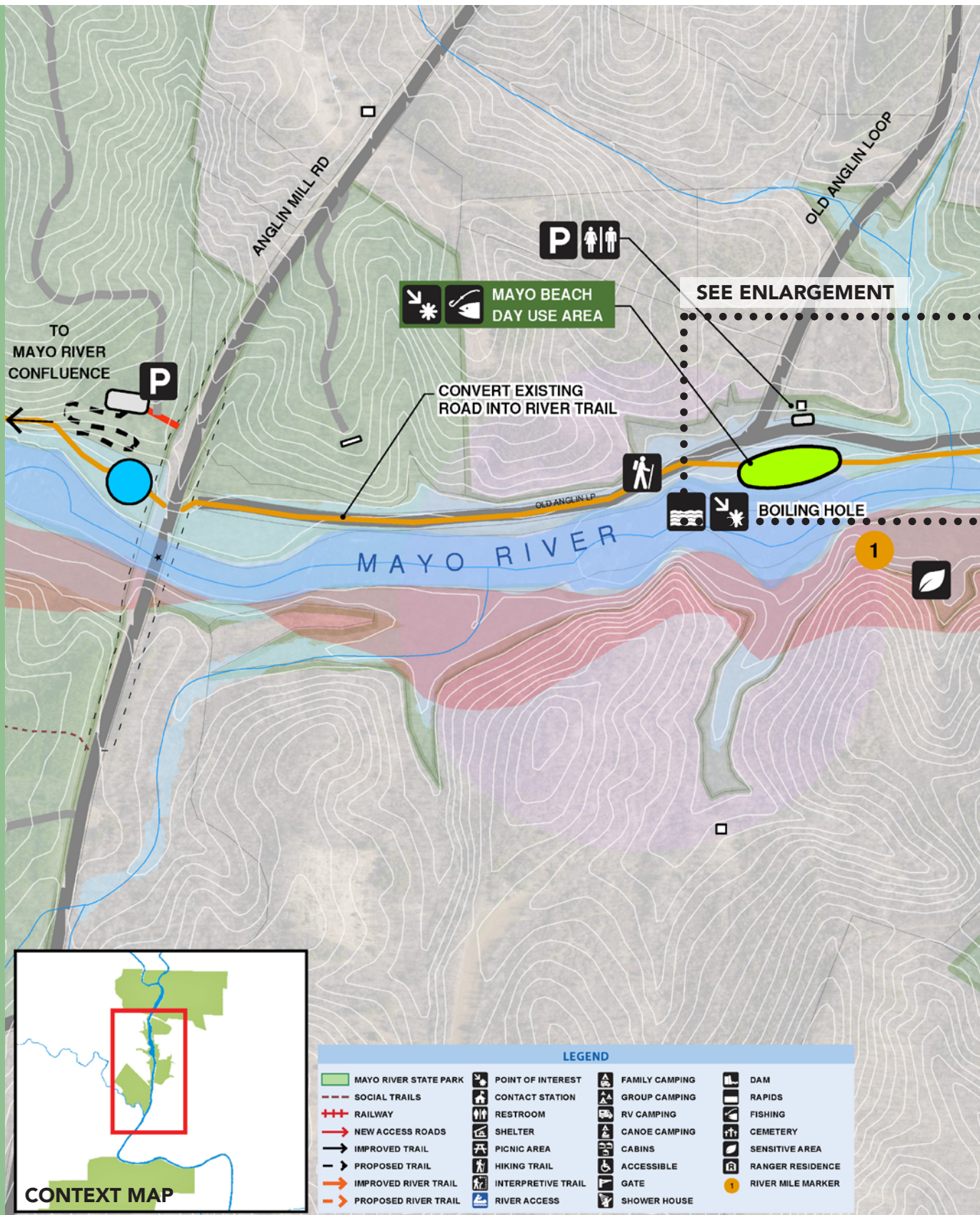


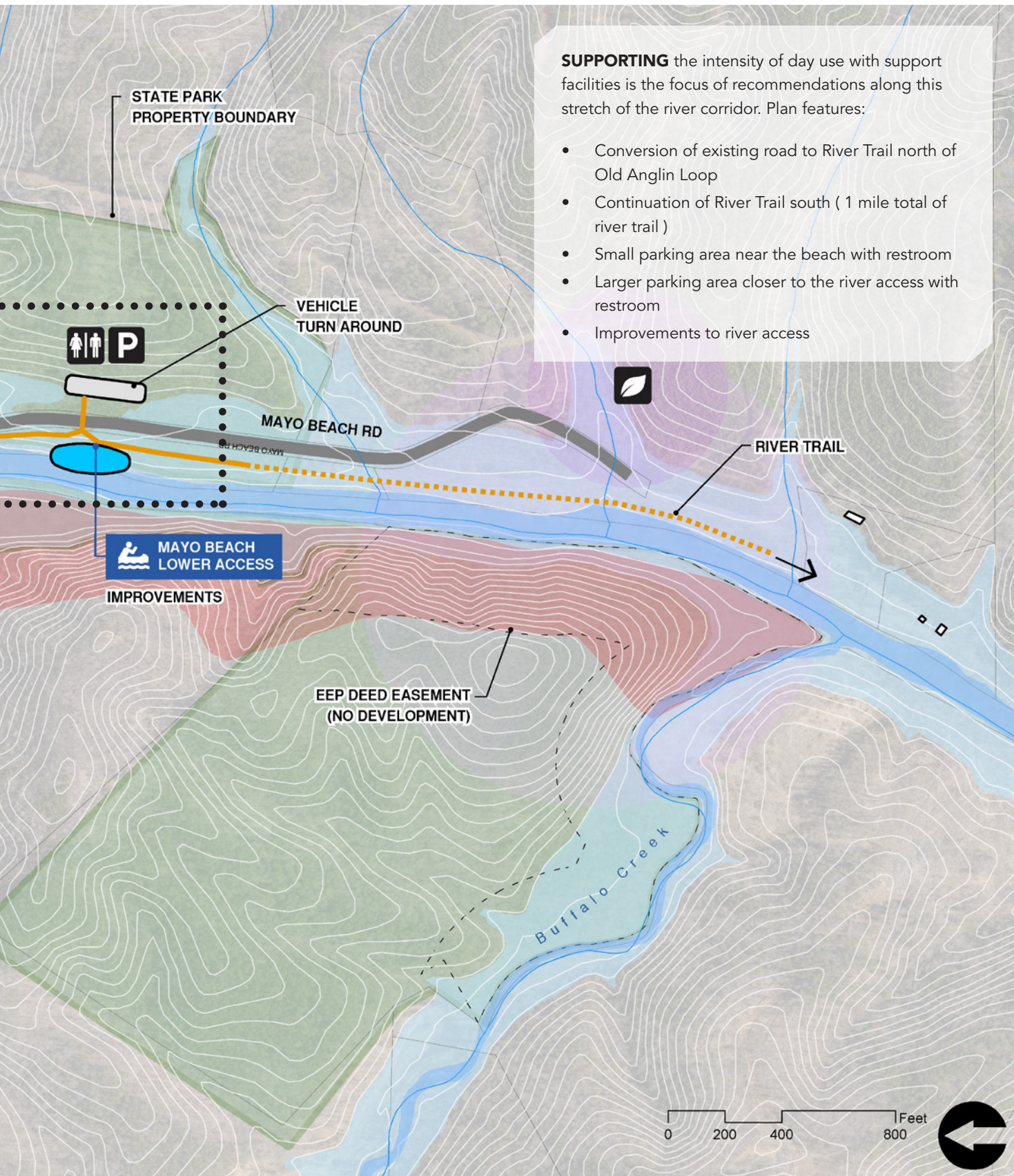
DESHAZO MILL ACCESS AREA



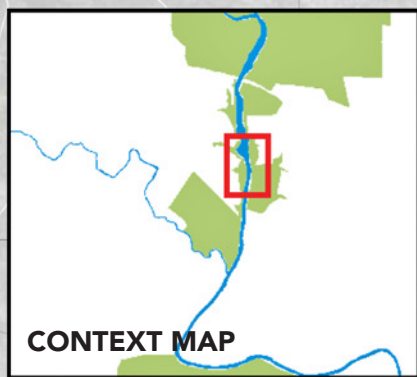


MAYO BEACH ACCESS





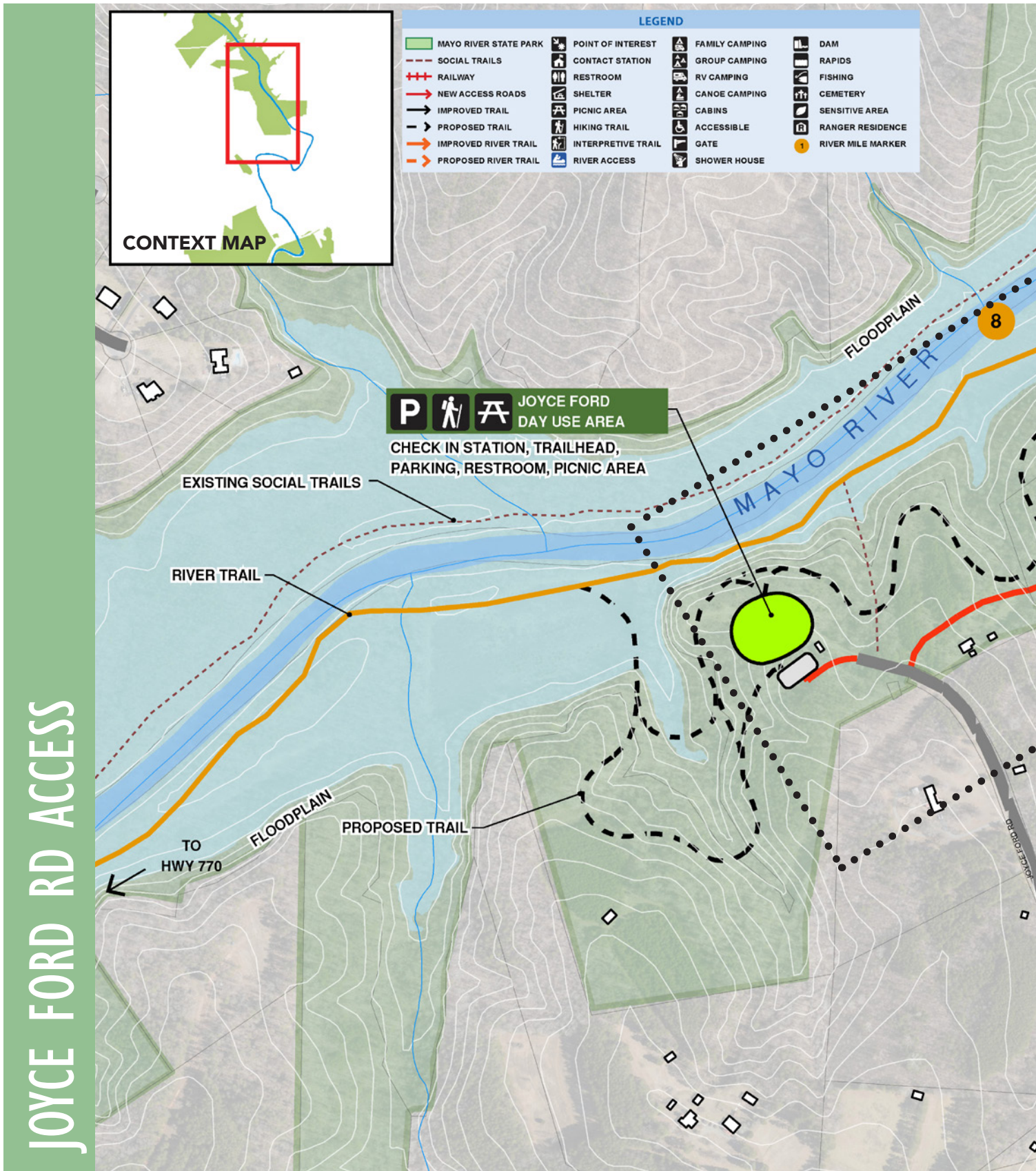
MAYO BEACH ACCESS / ENLARGEMENT

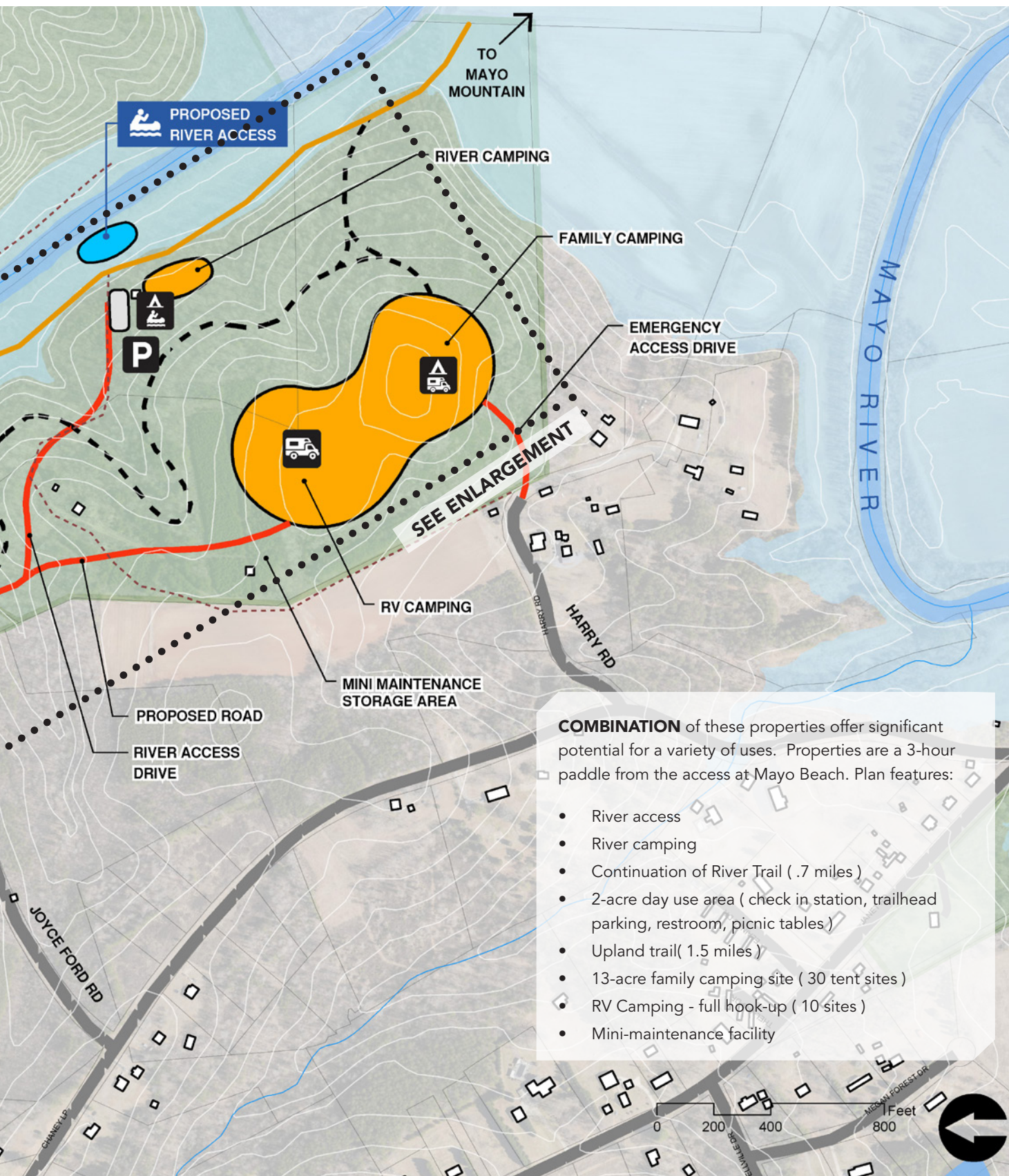


LEGEND			
	MAYO RIVER STATE PARK		POINT OF INTEREST
	SOCIAL TRAILS		CONTACT STATION
	RAILWAY		RESTROOM
	NEW ACCESS ROADS		SHELTER
	IMPROVED TRAIL		PICNIC AREA
	PROPOSED TRAIL		HIKING TRAIL
	IMPROVED RIVER TRAIL		INTERPRETIVE TRAIL
	PROPOSED RIVER TRAIL		RIVER ACCESS
	FAMILY CAMPING		RV CAMPING
	GROUP CAMPING		CANOE CAMPING
	CABINS		ACCESSIBLE
	GATE		SHOWER HOUSE
	DAM		FISHING
	CEMETERY		RANGER RESIDENCE
	SENSITIVE AREA		RIVER MILE MARKER

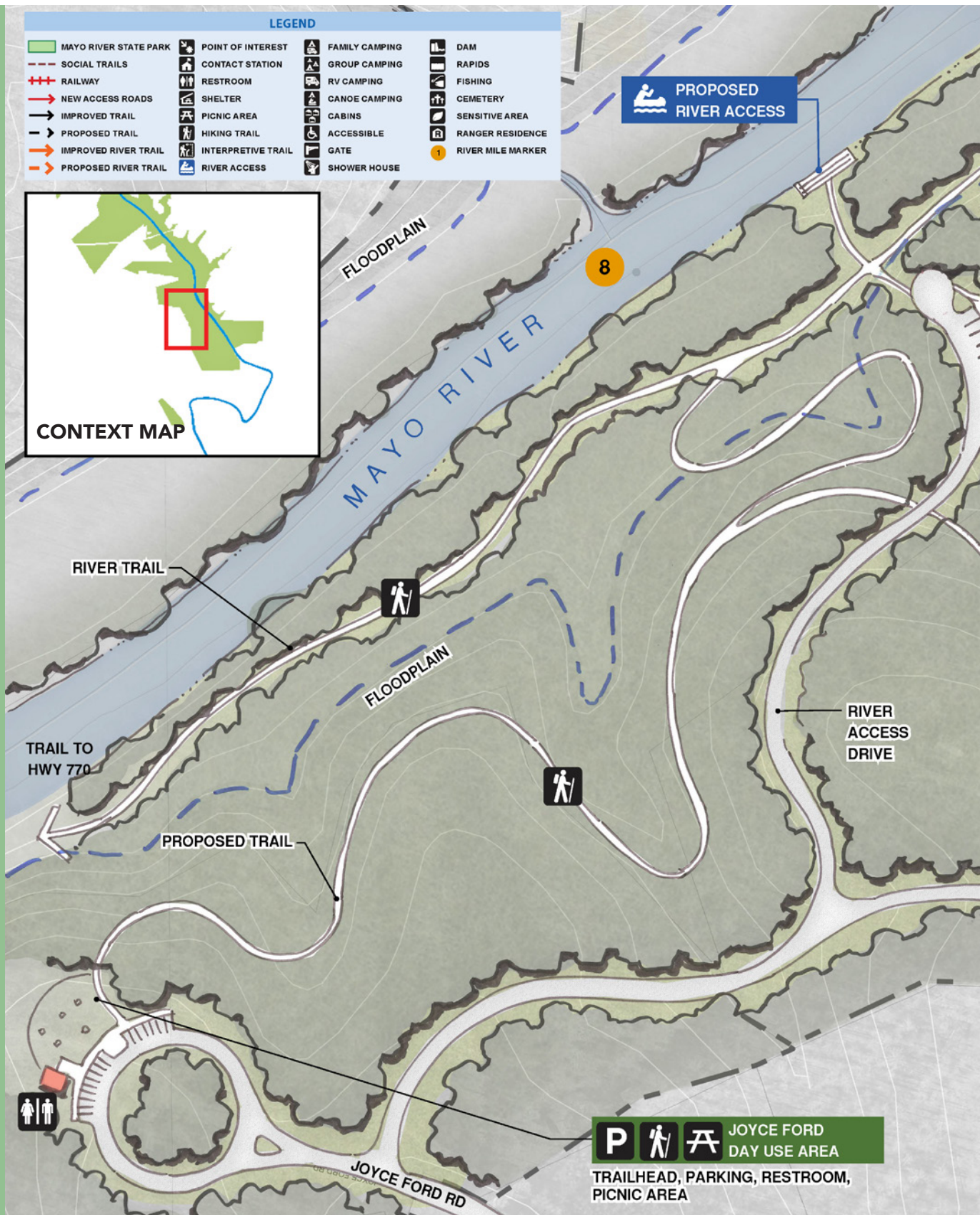






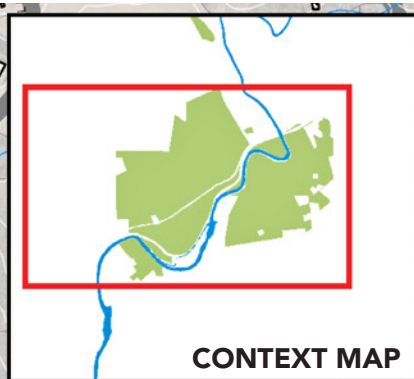


JOYCE FORD RD ACCESS / ENLARGEMENT





MAYO MOUNTAIN ACCESS



LEGEND			
MAYO RIVER STATE PARK	POINT OF INTEREST	FAMILY CAMPING	DAM
SOCIAL TRAILS	CONTACT STATION	GROUP CAMPING	RAPIDS
RAILWAY	RESTROOM	RV CAMPING	FISHING
NEW ACCESS ROADS	SHELTER	CANOE CAMPING	CEMETERY
IMPROVED TRAIL	PICNIC AREA	CABINS	SENSITIVE AREA
PROPOSED TRAIL	HIKING TRAIL	ACCESSIBLE	RANGER RESIDENCE
IMPROVED RIVER TRAIL	INTERPRETIVE TRAIL	GATE	RIVER MILE MARKER
PROPOSED RIVER TRAIL	RIVER ACCESS	SHOWER HOUSE	

WHILE these three areas are adjacent, they are not connected. The road, railroad, river and private property are all obstacles and present a challenge to connecting Avalon and Mayo Mountain to Cedar Mountain. Recommendations recognize the historical context of the sites and provide a variety of facilities in response to expressed needs. Full connectivity along BUS 220 and across bridge are dependent of future land acquisition and regional trail plans. The property (base of Cedar Mountain) is a 4-hour paddle from Mayo Beach.

Mayo Mountain Access Area

- Day use area improvements
- Group camping (3 sites)
- Additional trails
- Trail connection across BUS 220

Avalon Day Use

- Realign driveway with Old Mayo Park Road
- Day use area (parking, picnic shelter, walking trail)
- Educational signage (mill and mill village)
- Relocated maintenance facility

Cedar Mountain

- River access / take out (not removing BUS 220 access)
- River camping
- Trailhead parking
- Restroom
- Cedar mountain trail (3 miles with overlooks / trail to Avalon Dam)
- Education signage (natural resources)
- Picnic areas

MAYO MOUNTAIN ACCESS

PROPOSED CONTACT STATION, LANDSCAPE IMPROVEMENTS, PARKING EXPANSION, PATHWAYS

GROUP CAMPING
(3 PODS)

AVALON DAY USE AREA

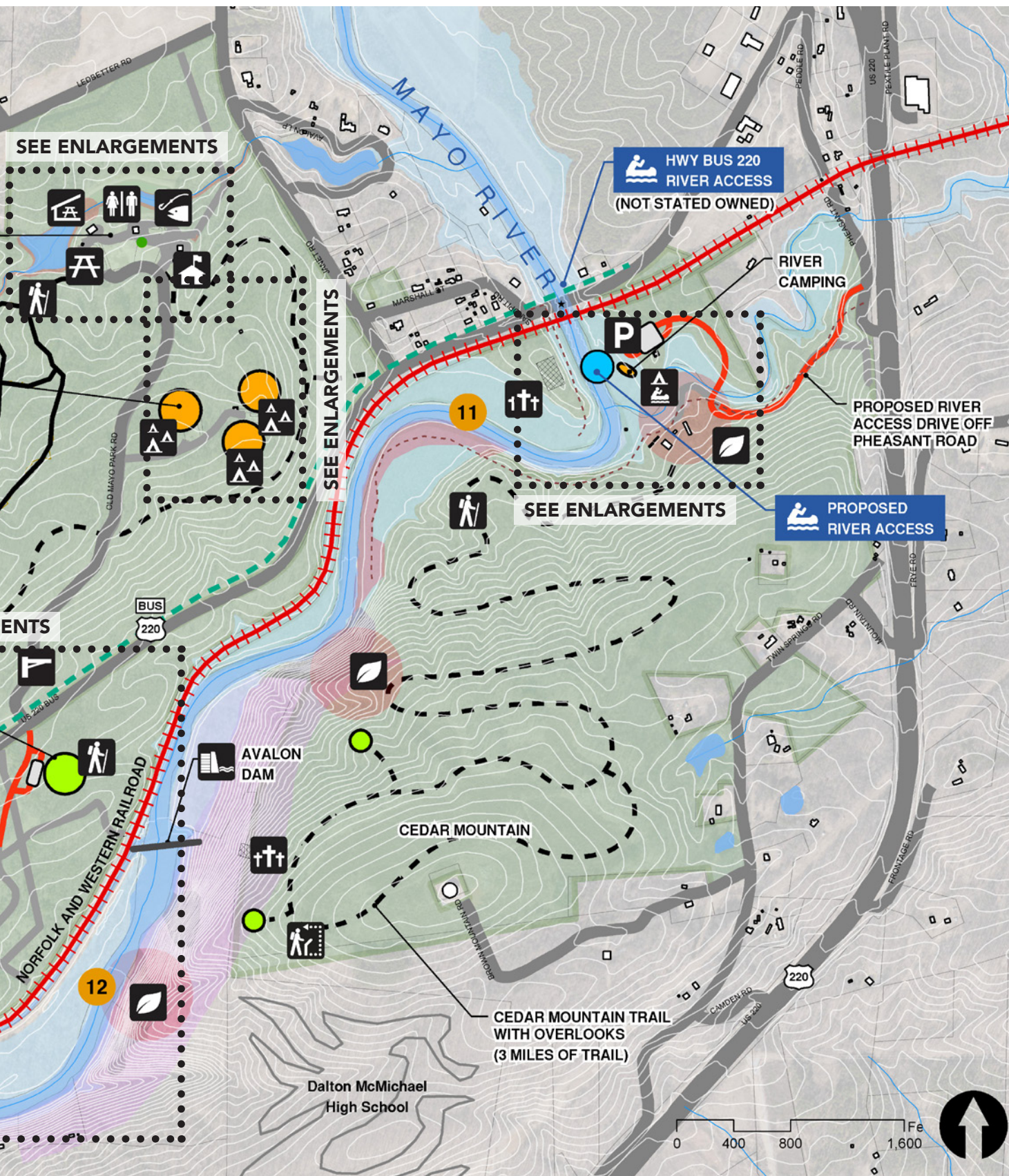
PARKING, PICNIC AREA, CEDAR MOUNTAIN VIEW, HISTORIC INTERPRETATION

SEE ENLARGEMENT

PLANNED TRAIL BY TOWN OF MAYODAN

RELOCATED MAINTENANCE AREA

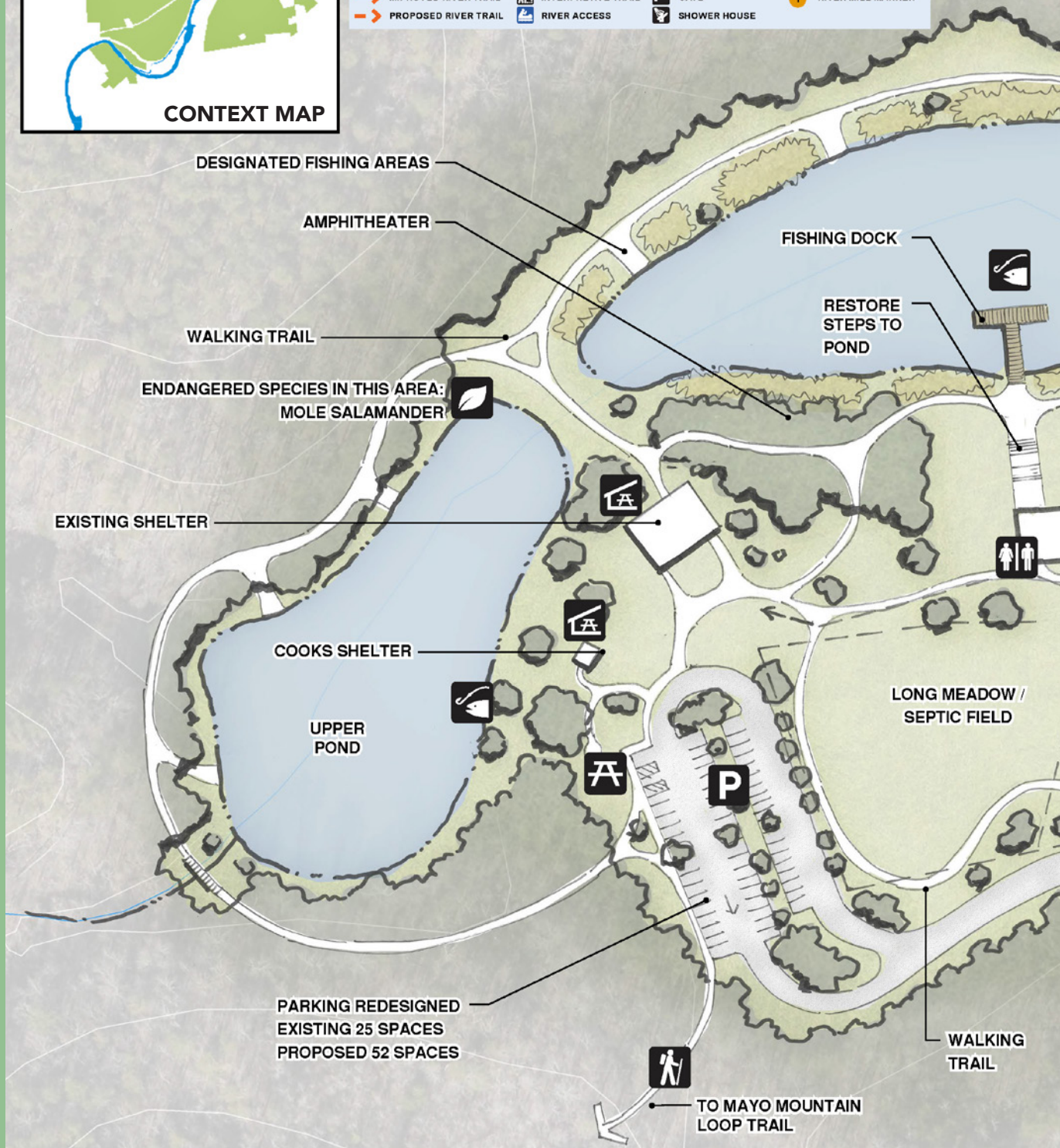
EXISTING RANGER RESIDENCE



MAYO MOUNTAIN ACCESS / CONTACT STATION

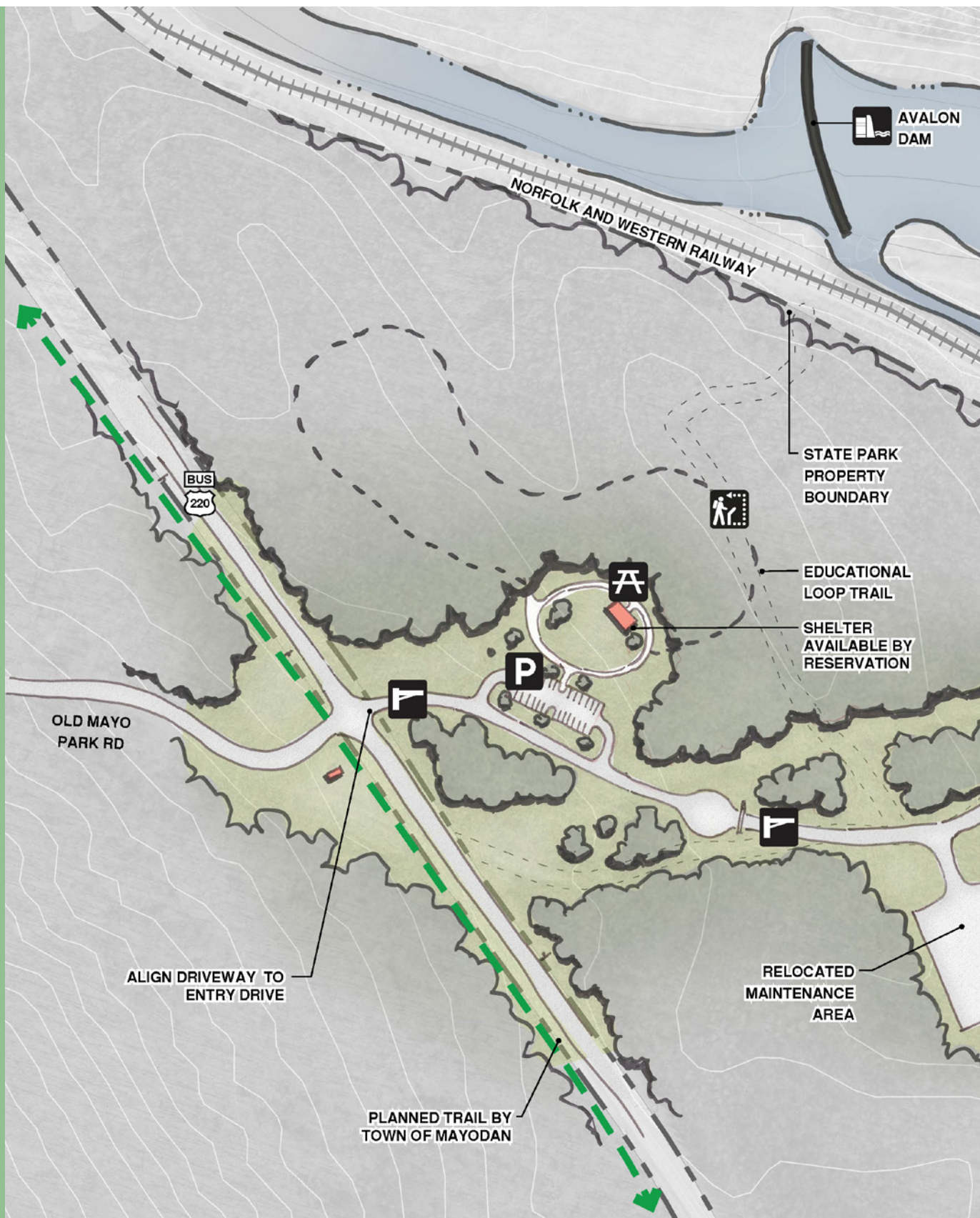


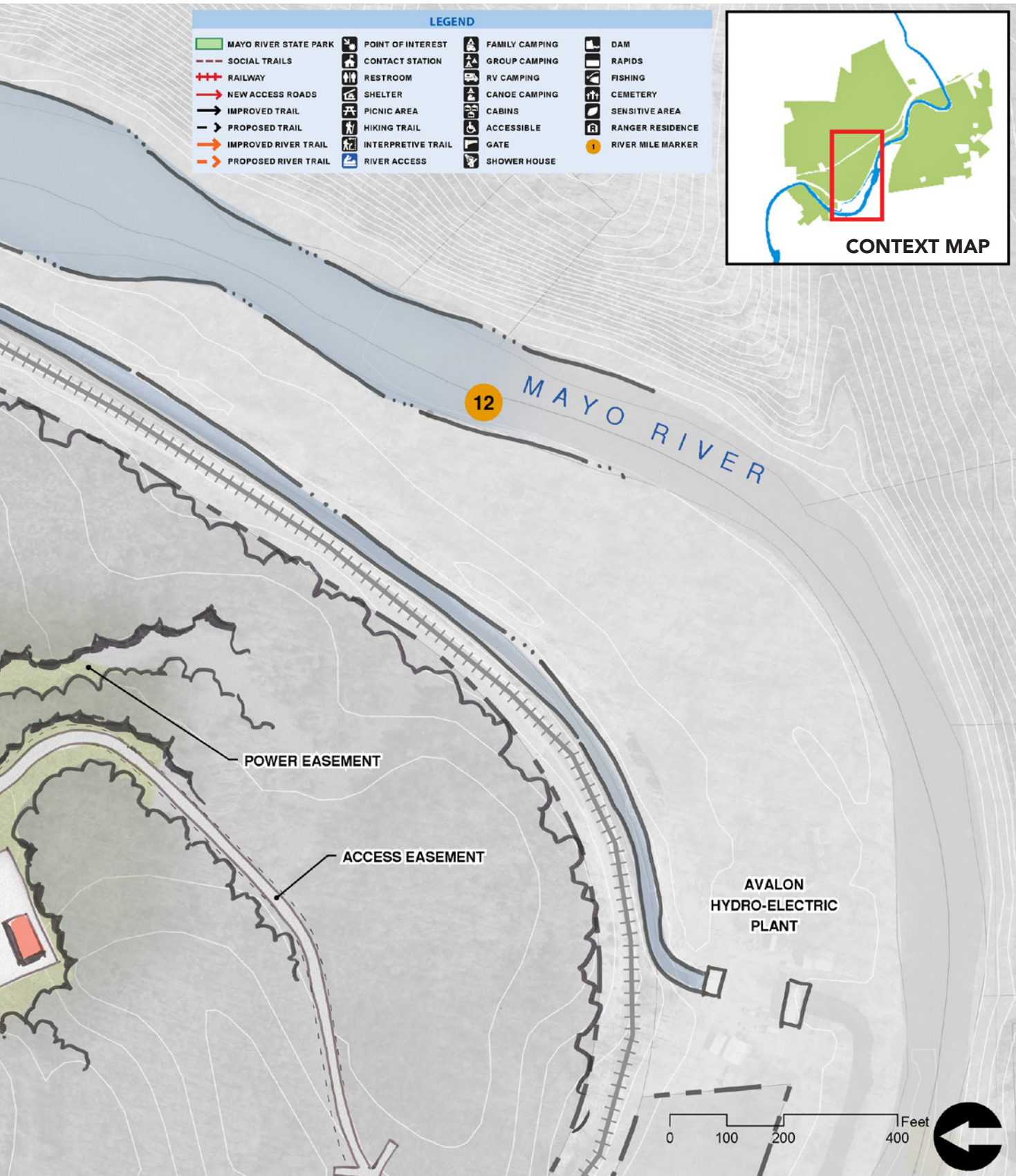
LEGEND			
	MAYO RIVER STATE PARK		POINT OF INTEREST
	SOCIAL TRAILS		CONTACT STATION
	RAILWAY		RESTROOM
	NEW ACCESS ROADS		SHELTER
	IMPROVED TRAIL		PICNIC AREA
	PROPOSED TRAIL		HIKING TRAIL
	IMPROVED RIVER TRAIL		INTERPRETIVE TRAIL
	PROPOSED RIVER TRAIL		RIVER ACCESS
			FAMILY CAMPING
			GROUP CAMPING
			RV CAMPING
			CANOE CAMPING
			CABINS
			ACCESSIBLE
			GATE
			SHOWER HOUSE
			DAM
			RAPIDS
			FISHING
			CEMETERY
			SENSITIVE AREA
			RANGER RESIDENCE
			RIVER MILE MARKER



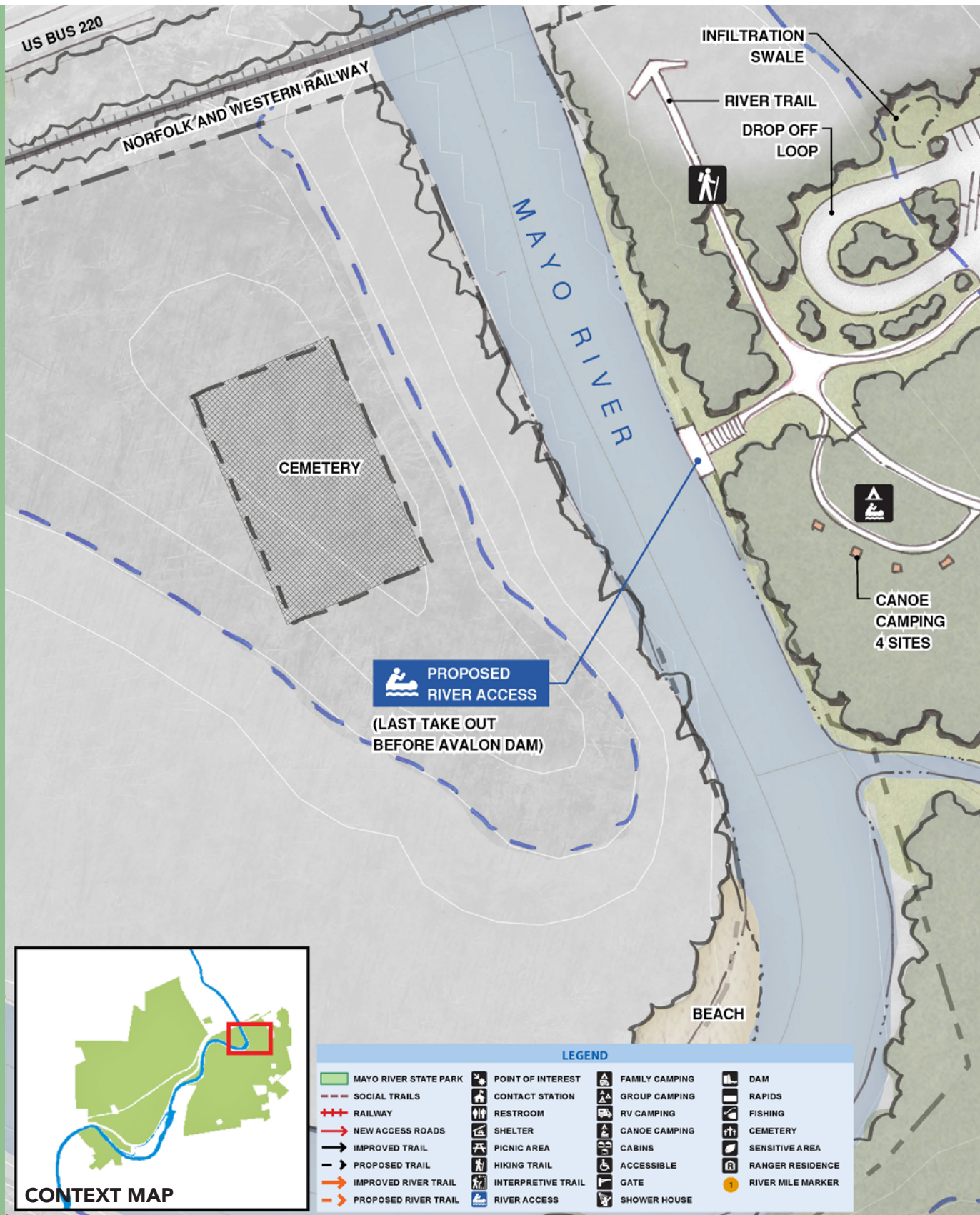


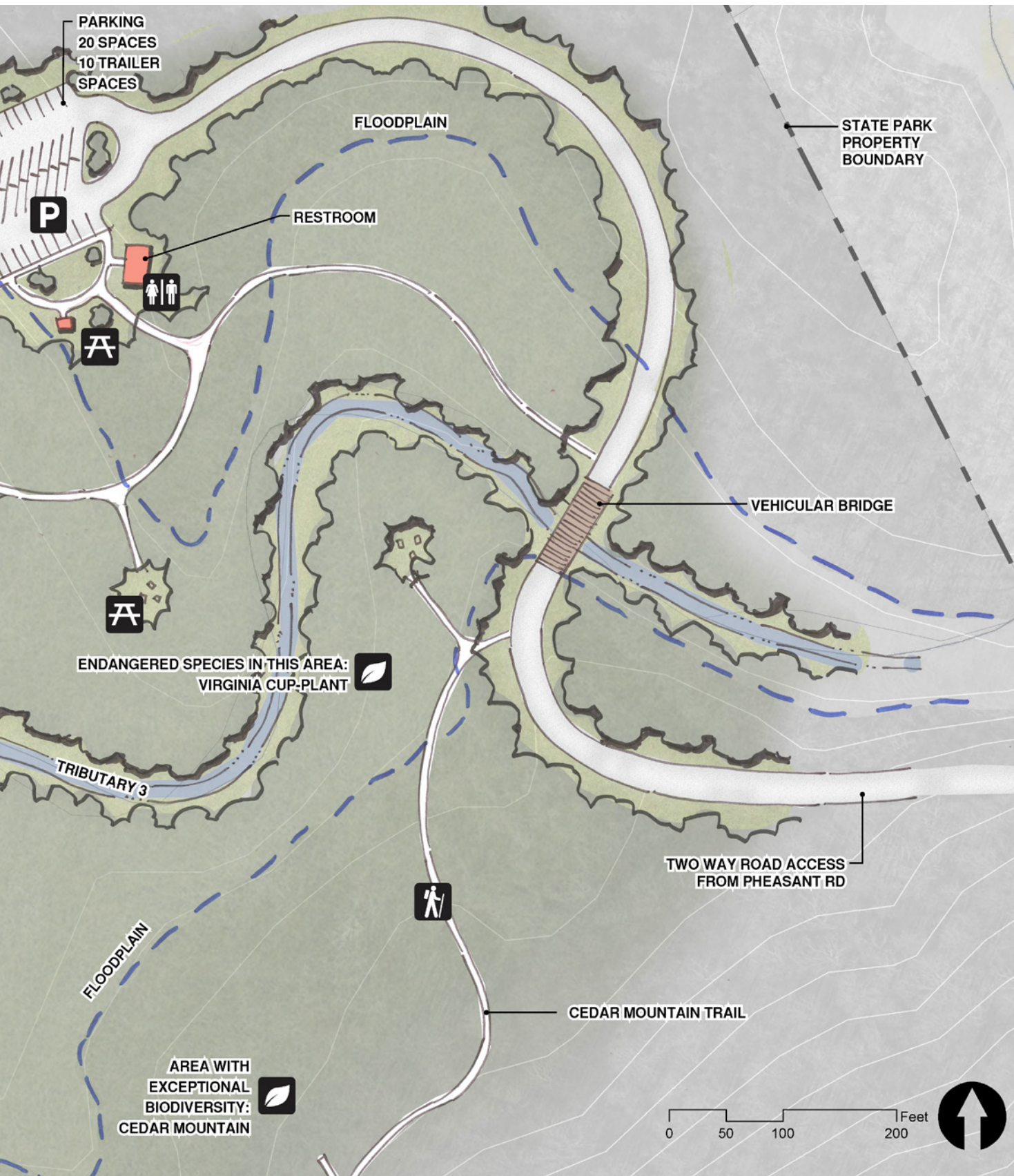
AVALON SITE / DAY USE AREA & MAINTENANCE





CEDAR MOUNTAIN ACCESS / RIVER ACCESS

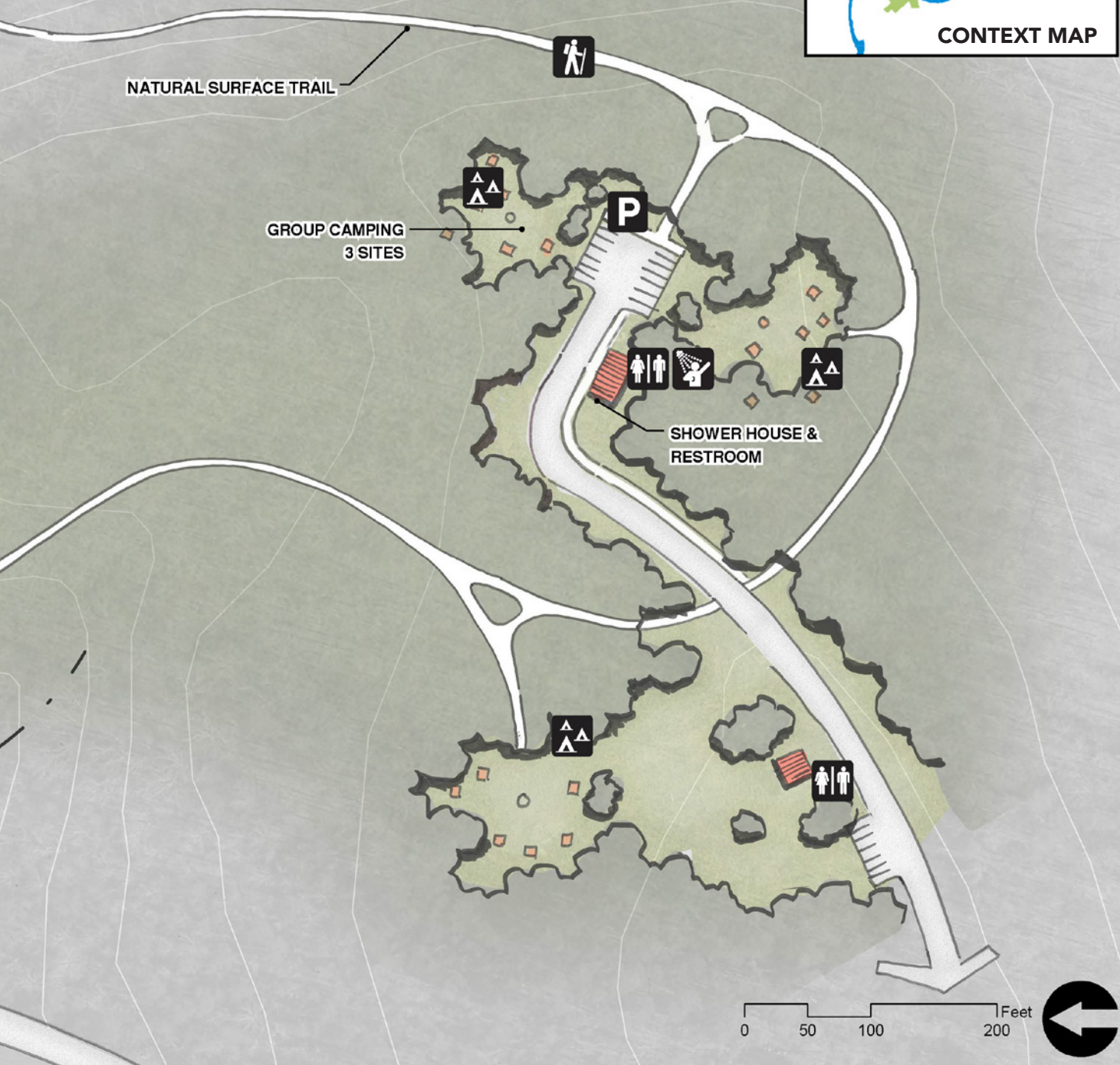
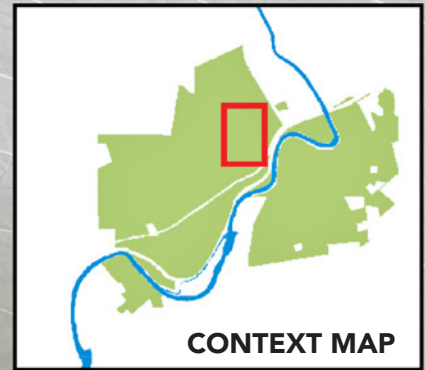




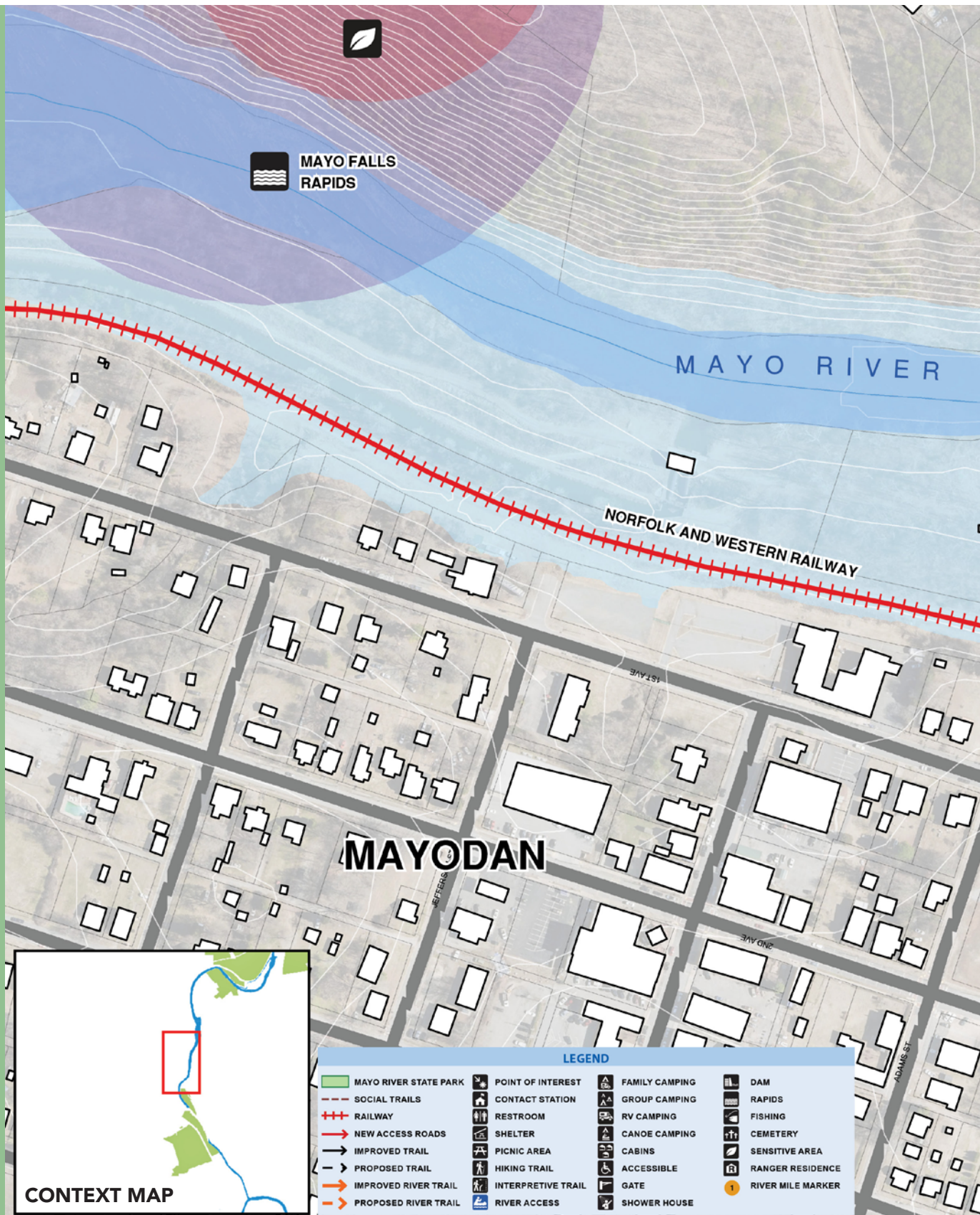
MAYO MOUNTAIN ACCESS / GROUP CAMPING

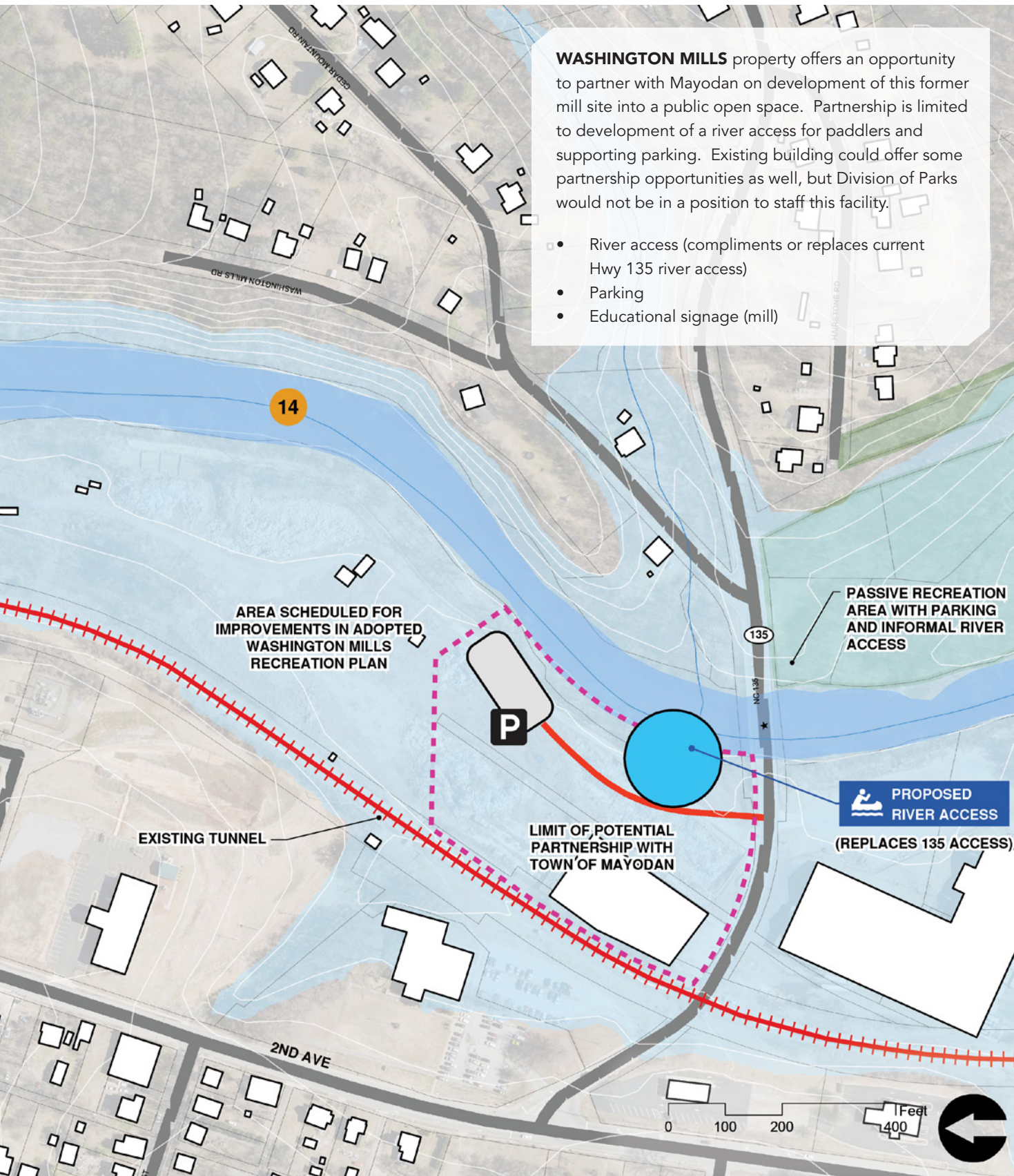


LEGEND			
	MAYO RIVER STATE PARK		POINT OF INTEREST
	SOCIAL TRAILS		FAMILY CAMPING
	RAILWAY		GROUP CAMPING
	NEW ACCESS ROADS		RV CAMPING
	IMPROVED TRAIL		CANOE CAMPING
	PROPOSED TRAIL		CABINS
	IMPROVED RIVER TRAIL		ACCESSIBLE
	PROPOSED RIVER TRAIL		GATE
			SHOWER HOUSE
			RESTROOM
			PICNIC AREA
			HIKING TRAIL
			INTERPRETIVE TRAIL
			RIVER ACCESS
			DAM
			RAPIDS
			FISHING
			CEMETERY
			SENSITIVE AREA
			RANGER RESIDENCE
			RIVER MILE MARKER



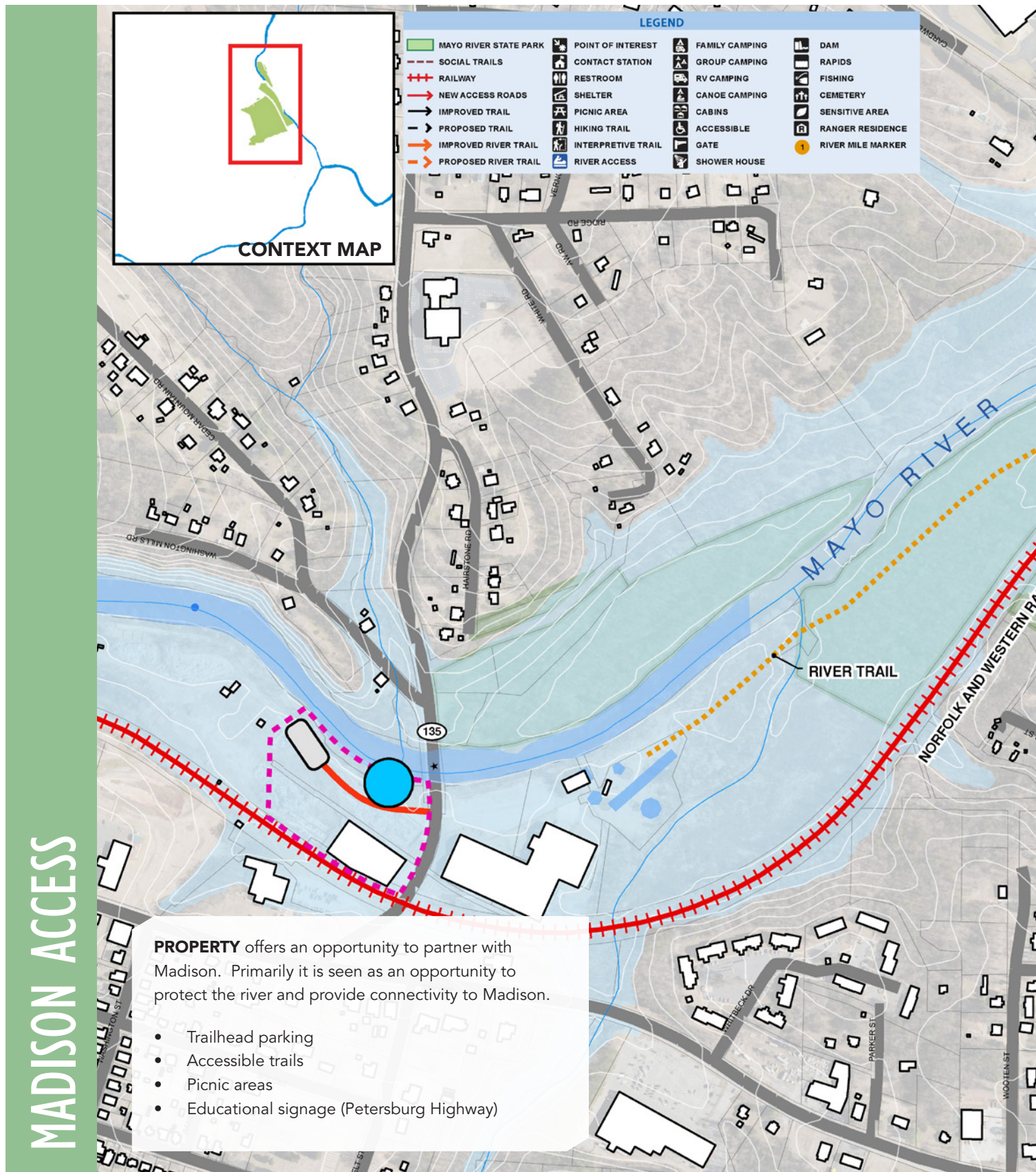
WASHINGTON MILLS ACCESS

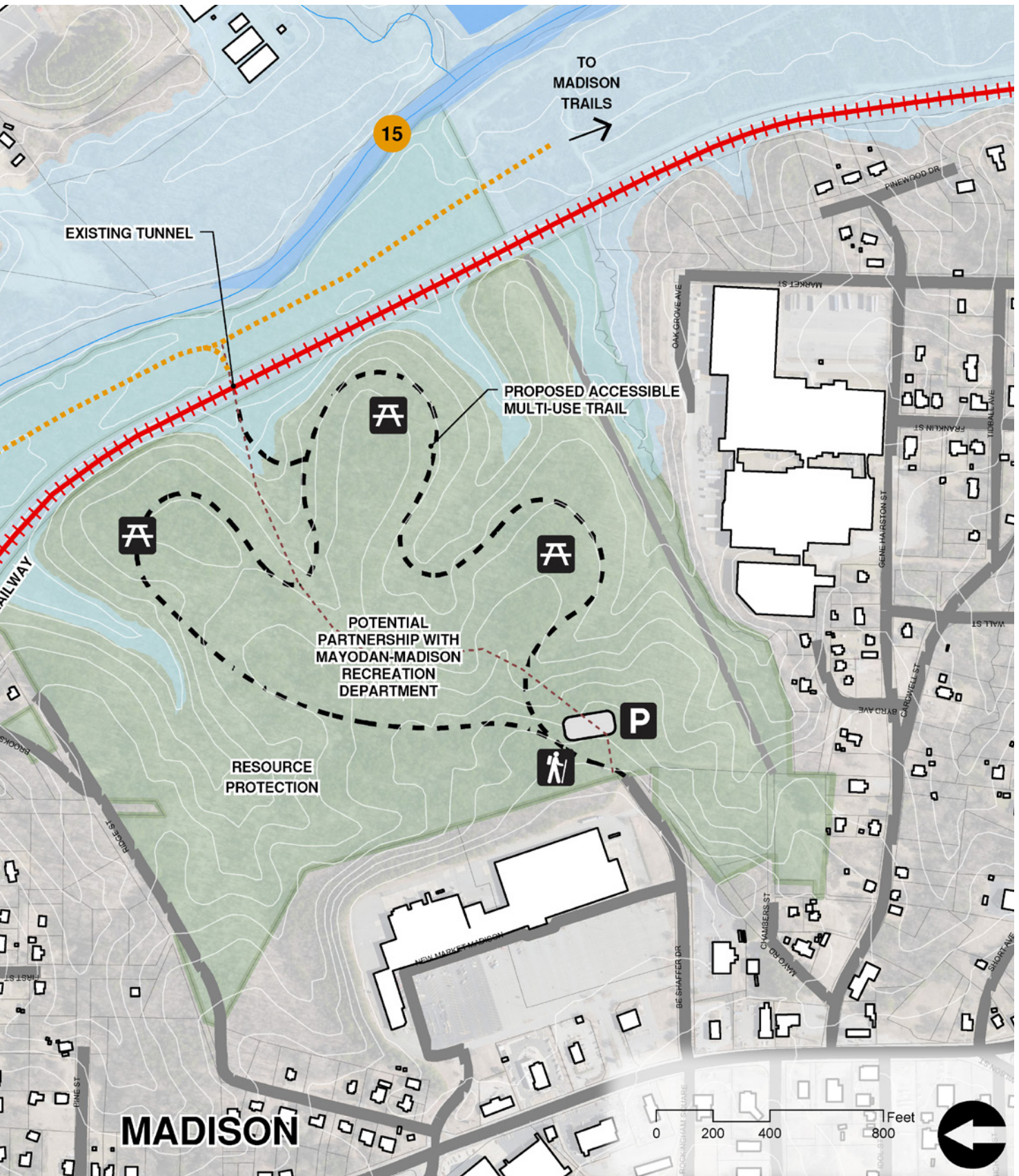




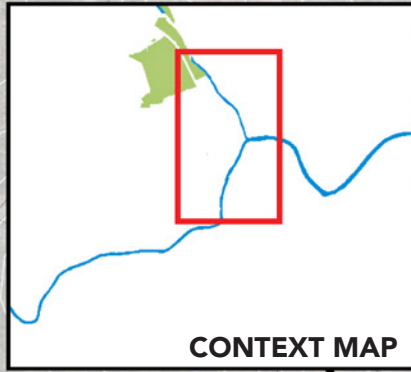
WASHINGTON MILLS property offers an opportunity to partner with Mayodan on development of this former mill site into a public open space. Partnership is limited to development of a river access for paddlers and supporting parking. Existing building could offer some partnership opportunities as well, but Division of Parks would not be in a position to staff this facility.

- River access (compliments or replaces current Hwy 135 river access)
- Parking
- Educational signage (mill)





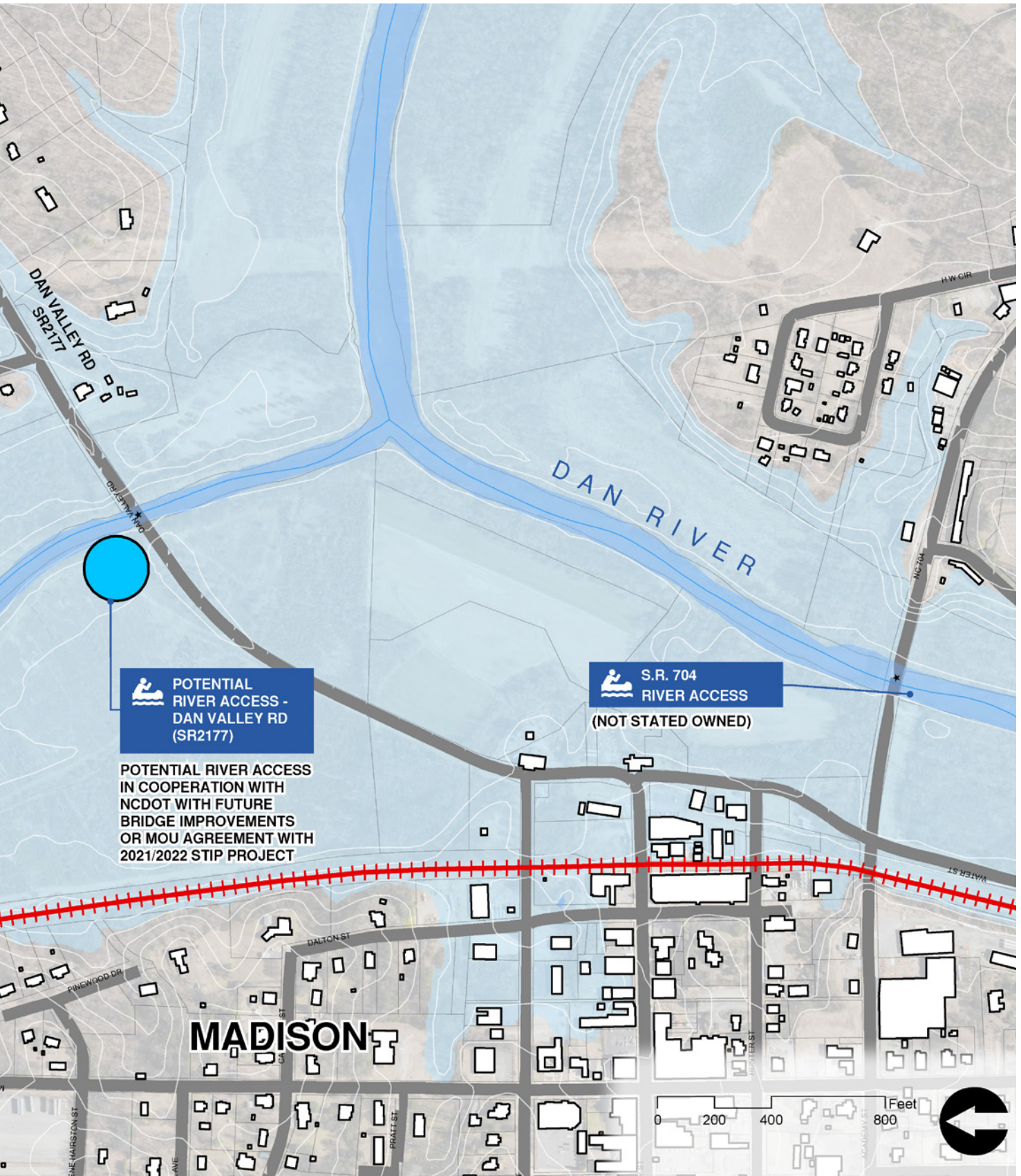
DAN VALLEY RD BRIDGE / RIVER ACCESS

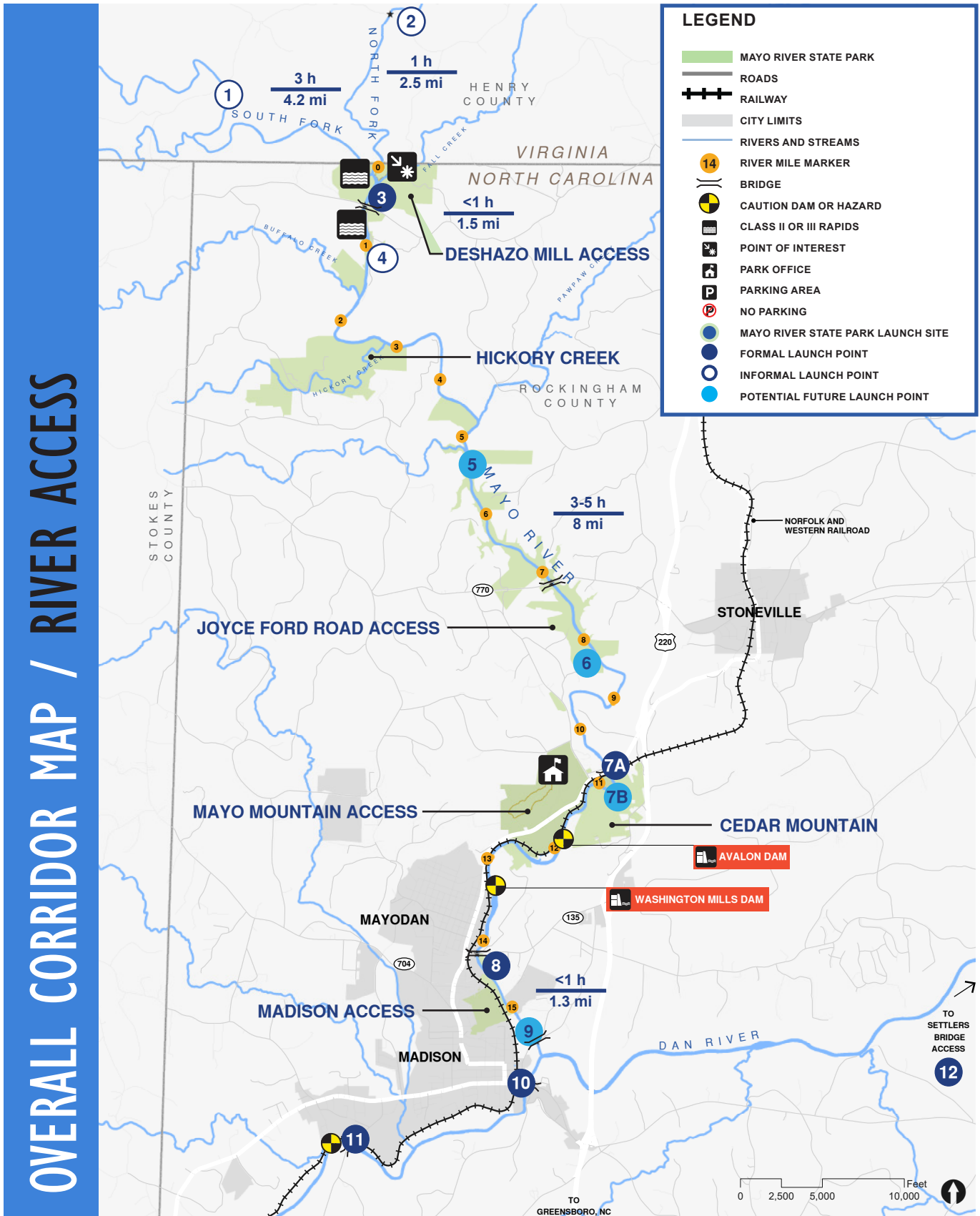


LEGEND			
	MAYO RIVER STATE PARK		POINT OF INTEREST
	SOCIAL TRAILS		CONTACT STATION
	RAILWAY		RESTROOM
	NEW ACCESS ROADS		SHELTER
	IMPROVED TRAIL		PICNIC AREA
	PROPOSED TRAIL		HIKING TRAIL
	IMPROVED RIVER TRAIL		INTERPRETIVE TRAIL
	PROPOSED RIVER TRAIL		RIVER ACCESS
			FAMILY CAMPING
			GROUP CAMPING
			RV CAMPING
			CANOE CAMPING
			CABINS
			ACCESSIBLE
			GATE
			SHOWER HOUSE
			DAM
			RAPIDS
			FISHING
			CEMETERY
			SENSITIVE AREA
			RANGER RESIDENCE
			RIVER MILE MARKER

THIS SECTION of the Mayo offers the final chance to take out before reaching the Dan River confluence. A proposed river access at the Dan Valley Rd bridge would require a potential partnership with NCDOT. Other improvements required include:

- Parking
- Access Drive





RIVER ACCESS SUMMARY

Improvements are primarily recommended for the Mayo Beach Lower Access. This will continue to be a popular put in location for locals and visitors to the Park. Three additional points of access are intended to allow paddlers the option for shorter trips and access to amenities such as camping and hiking as well as allowing emergency access for first responders. Each location has its own unique permitting considerations detailed in this section.

PADDLE ACCESS DATA

Access #	River Mile	Location	Difficulty to Next Access	Distance to Next Access	Time to Next Access	Amenities (Ex. / Prop.)	Comments
MAYO RIVER (Virginia)							
1		George Taylor Road at South Fork (To Anglin Mill Road Bridge)	Class I & II Intermediate	4.2 miles	3 hours 3		Includes the Stairsteps Rapids
2		Moore's Mill Road at North Fork (To Anglin Mill Road Bridge)	Class I & II Intermediate	2.5 miles	1 hour 3		Includes Byrd's Ledge & the Stairsteps Rapids
MAYO RIVER (North Carolina)							
3		Mayo Beach Upper Access (Anglin Mill Road Bridge)	Class II & III Advanced	1.5 miles	<1 hour 4		Currently inaccessible due to road wash out
4	1	Mayo Beach Lower Access (Mayo Beach Road)	Class I Beginner	4 miles 8 miles	2 hours 5 3-5 hours 7		
5	5	Mid way point. Location TBD.	Beginner	2 miles	1 hour 6		Emergency Access within close proximity to Nickel Plate Road
6	8	Joyce Ford Rd Access	Beginner	2.5 miles	1 hour 7		Proposed Camping and Day use area
7A	11	US-220 BUS Bridge Access (to Avalon Dam)	Beginner		Exit Here		Challenging take out
7B	11	Cedar Mountain Access	Beginner		Exit Here		No portage around Avalon Dam
8	14	NC 135 Access	Beginner	0.6 miles 1.3 miles	<1 hour 9 <1 hour 11		Paddle up Dan River to 704 Access
9	15	N Water Street, Dan Valley Rd SR 2177 (Stone Pier from old covered bridge, 1892)	Beginner	0.6 miles 8 miles	<1 hour 11 3-5 hours 12		Last Opportunity to take out before Dan River
DAN RIVER							
10		Lindsey Bridge Road Access	Class I Beginner	2.5 miles	1-2 hours		
11		Highway 704 Access	Class I Beginner	8 miles	3-5 hours		
12		Settlers Bridge Access (not shown)	Class I to II Intermediate	10 miles	4-6 hours		

*Paddle time calculated assuming 2 mile per hour rate of speed.

RIVER ACCESS DESIGN & PERMITTING CONSIDERATIONS

As with any improvement undertaken by the Division all proper permitting will be undertaken and protection of the resource is of the utmost importance. This section will discuss some potential permitting items that may be required for the proposed river accesses along the river corridor.

Deshazo Mill Access:

Considerations for the Deshazo Mill Access are primarily for the planned crossings of three FEMA regulated streams: the Mayo River, Fall Creek and an Unnamed Tributary (UT) to Fall Creek. The Mayo River in this area has a regulated floodway of approximately 300 feet and a river width of approximately 80 feet. A single bridge spanning the Mayo (up to 150ft) may be possible if a Conditional Letter of Map Revision (CLOMR) is obtained. Upstream impacts extending into Virginia are possible from the construction of the bridge. The other planned crossings are on streams with a regulated floodplain and a non-encroachment area. It may be possible to obtain approval for bridge construction if the non-encroachment area is not a regulated floodway and a cumulative impact of not more than one foot of rise is obtained. Impacts within the floodway of the Mayo River should be avoided at the Mayo Beach Upper Access. Contraction of flow on the upstream side of bridges can also create increased velocities and backwater eddies that need to be considered with improvements in this area.

Lower Mayo River Access:

Access to the river needs to be sited in an area with a stable bank and outside of the river bend, which is exposed to higher stresses and velocities. The river access will need to be designed to withstand debris impacts during high flows and maintenance will be necessary as sandy materials deposit as waters recede. A no-rise or CLOMR will be required for this access as it encroaches into the river and into the FEMA regulated Floodway. A no-rise is defined as a change in the water surface elevation from the existing to proposed conditions that does not exceed +0.00-foot and is not lower than -0.10-foot and can be approved by the Local Floodplain Administrator. If these limits are exceeded by the proposed work, a CLOMR would need to be applied for through FEMA. As long as the impacts are not excessive, do not adversely impact existing structures, and meet all other federal permits they are usually



BRIDGE CROSSING A STREAM AT ENO RIVER STATE PARK, NC



RIVER ACCESS AT SALUDA SHOALS PARK IN COLUMBIA, SC

permissible. CLOMRs once granted are then followed by a Letter of Map Revision (LOMR) once construction has been completed. A constructed boat access may require a USA Army Corps of Engineers 404 permit and State Water Quality 401 Certification if impacts occur to the river below its the mean high-water level. USA Corps of Engineers 404 permits can fall under general permits or an individual permit can be obtained.

Emergency Access

Access to the Mayo River for emergency response becomes more important as the number of paddlers increases. An emergency access point approximately halfway between the Mayo Beach access and the current BUS 220 / proposed Cedar Mountain access is ideal. An emergency access point is intended only for Park staff and first responders as a place to launch a boat or set up a command post in the event of a water rescue.

The access should be located in an area that is in a straight segment of the stream and where the transition to the stream can be achieved without excessive cutting. The access should be oriented in a down stream direction and in an area that can be tied into an area with a mature tree that has a substantial root system providing stabilization for the transition to the stream.

Impacts within the floodway to construct the access will require a FEMA no-rise or CLOMR approval along with potential US Army Corps of Engineers 404 and NC State Water Quality 401 certification.

Joyce Ford Rd:

The majority of the planned improvements are to be outside of the FEMA floodplain. Crossings of draws by roadways and trails would need to be designed to freely convey stormwater, avoiding downstream erosion issues caused by concentrated discharges. Boardwalks used to span draws are a good alternative to pipes allowing the natural condition of the channel to remain. Boardwalk sections can be made of wood or concrete. The proposed river access is planned to be angled to the river so that the resistance energy of flow passing over the access during storm events is reduced. As with all river access the planned amenity will need to be designed for varying river heights, be able to withstand variable velocities, and withstand erosional



EXISTING VEGETATION AT NICKEL PLATE RD



KAYAK LAUNCH ON THE ROANOKE RIVER IN ROANOKE, VA



RIVER ACCESS AT THE FREEMANS BRIDGE BOAT LAUNCH ALONG THE MOHAWK RIVER IN SCHENECTADY, NY



forces and debris impacts. USA Corps of Engineers 404 permits and State of NC Water Quality 401 certifications may be required along with a FEMA no-rise or CLOMR for improvements within the floodway of the Dan River.

Cedar Mountain (US BUS 220):

The Cedar Mountain site will have impacts within the floodplain and non-encroachment areas of the Mayo River and Mayo River Tributary 3. The trail/roadway crossing of the tributary and proposed river access will require either a no-rise or CLOMR. The placement of the river access above the meander bend and confluence with Tributary 3 is required for long term stability of the access. The velocities of the restricted flow exiting the bridges will also be reduced at this location. The design of the access will need to include the variable forces and permits will be required to be obtained from the USA Army Corps of Engineers and NC State Water Quality agencies.

Washington Mills (Hwy 135):

The access point for Washington Mills site is located in the Lower Mayo River with regulated floodways and floodplain. Existing structures currently impacted by floodwaters which cannot be impacted further through additional increases in peak water surface elevations are located adjacent to and upstream of this site. Land use changes and improvements will have to be carefully evaluated in the FEMA modeling analysis. Existing structures or other obstructions planned to be removed may provide reductions in water surface elevations. A no-rise will be required to be obtained for improvements at this river access location or a LOMR obtained upon completion of construction if the reduction in water surface elevation is greater than -0.1-foot.

Dan Valley Road Bridge:

The Dan Valley Road Bridge access area on the Mayo River is just above the confluence with the Dan River. Due to the proximity of the roadway, Dan Valley Rd may also be within the floodplain of the Dan River. The proposed improvements may be required to satisfy a no-rise condition in both the Dan River as well as the Mayo River. If the access is completed with the roadway improvements the resulting combined impacts may satisfy a no rise condition. Existing structures are located within the floodplain adjacent to this location and therefore no increase in water surface elevations would be permitted.



RIVER ACCESS ON THE JAMES RIVER AT POWHATAN STATE PARK, VA



KAYAK LAUNCH AT GRAHAM CREEK NATURE PRESERVE IN FOLEY, AL



ACCESSIBLE RIVER ACCESS AT HANGING ROCK STATE PARK, NC

The River Trail:

The River Trail is important to connect isolated park property. It is envisioned to stretch from the Virginia border to the Dan River Confluence, the trail will be implemented as land is acquired along the river corridor. The trail should be designed and constructed by a trail specialist, implementing sustainable trail design practices that are appropriate for a river corridor.

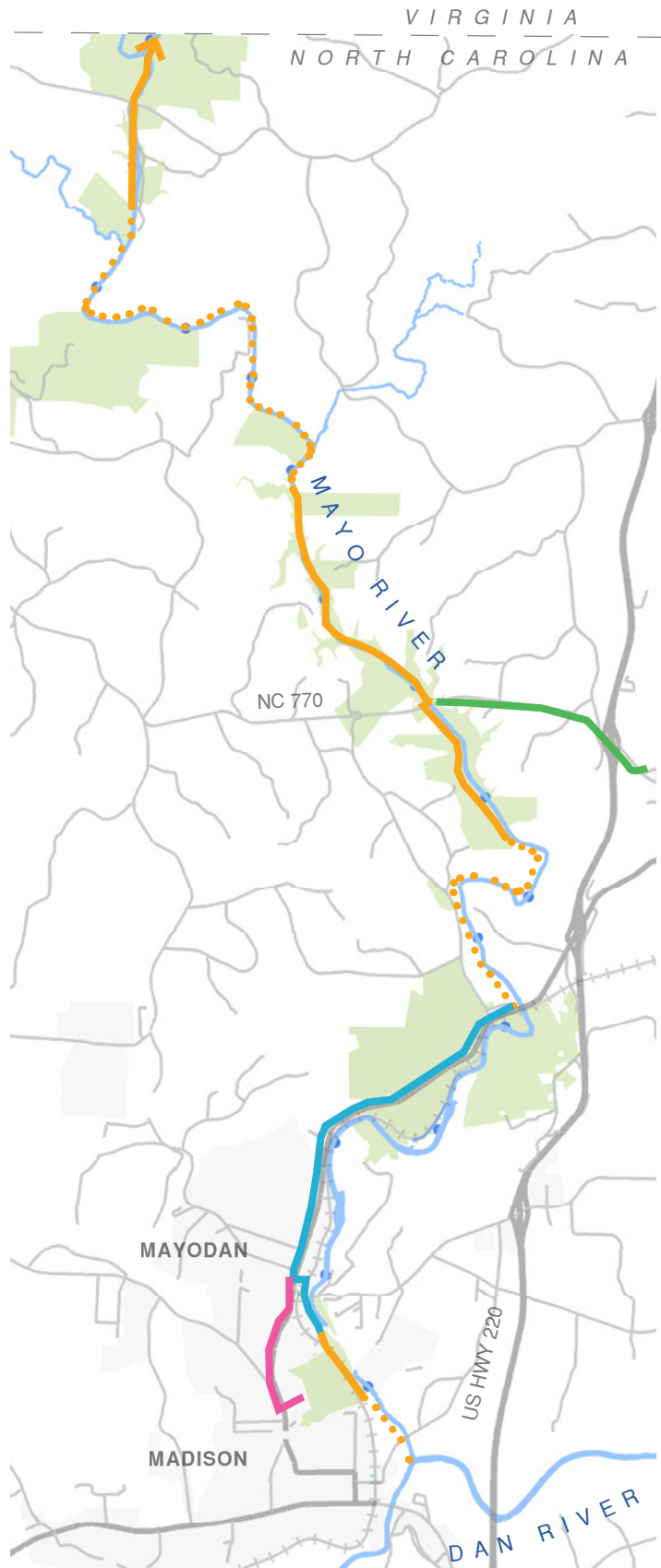
Trails and bridge crossings that are perpendicular to the Mayo River are also potential impacts and will have to be modeled for flood impacts. They are subject to the same no-rise and CLOMR/LOMR requirements. The removal of trees for trails can be an impact because of land use and potential maintenance corridors. If fill is required to elevate asphalt or concrete trails that is also a potential impact as well as stairs and handrails. If there are buildings that are already impacted upstream of any area that is being improved within a FEMA floodplain, the only permissible solutions are either for a no-rise or to have the modeling show a drop in excess of -0.1-foot which is followed by a LOMR upon completion of construction.

- Future River Trail on Park Property
- ... Potential River Trail on Private Property

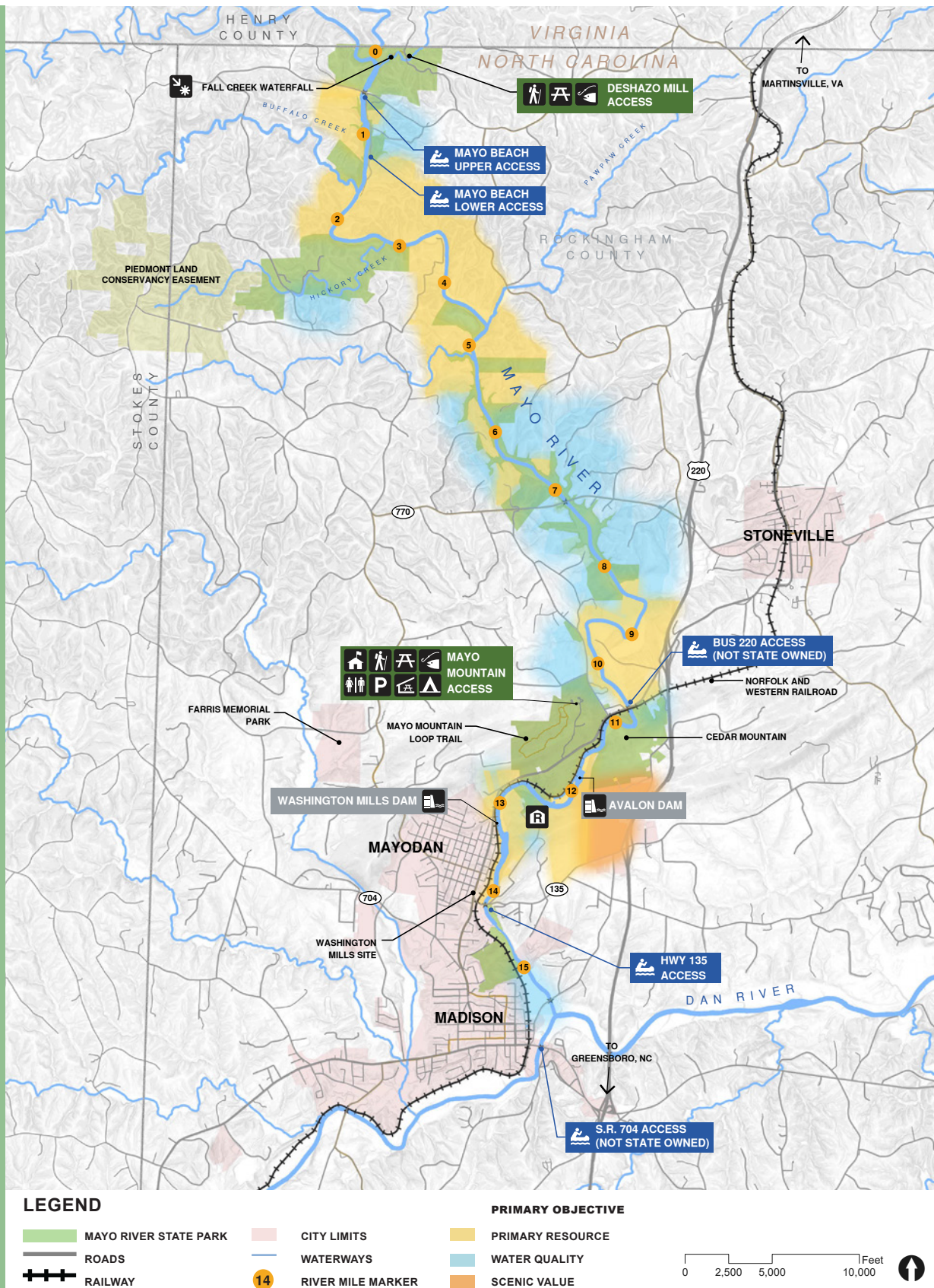
OTHER PLANNED TRAILS

This map also shows planned trails in the area that may link up to Mayo River trail.

- Stoneville Connector
- Mayodan/NCDOT Trails
- Madison Trails



LAND PROTECTION PLAN



ACQUISITION

This map is based on the general priorities and objectives of NC State Parks to further expand the boundaries of Mayo River State Park. Any park expansion would only be acquired through voluntary means. In no way is this map meant to display specific properties or property owners, or to indicate progress on the voluntary acquisition process.

THE STRATEGY

Acquisition of High Priority Conservation Areas



Natural landscapes surrounding the river corridor are home to rare and endangered species as well as provide an important role in protecting the water quality of the Mayo. Priorities are based on preservation of habitat for rare and threatened flora and fauna as well as limiting development along the banks.



Protection of Viewsheds and Recreational Access

Recreational access and views of the river are high priorities of this plan. Surrounding land use, impact to views and lack of access to the river can have a detrimental impact on park user experience.



Acquisition for Park Connectivity

Acquisition to create a continuous park boundary can help maintain park experience, allow connectivity of wildlife corridors and simplify park boundary monitoring and maintenance.

COST CONSIDERATIONS

Probable construction costs have been formulated for implementation of each phase identified by the master plan.

Construction costs presented are based on current (2020) costs incurred for similar facilities in other state parks and not adjusted over time to account for inflation. More accurate estimates and costs will be determined as part of the design process based on site specific and detailed existing conditions information.

Costs not covered by these estimates include the following:

- Land Acquisition
- Geotechnical / soils investigation
- Contaminated soil remediation
- Rock removal
- Surveying
- Permitting (environmental, building and erosion control)
- Archaeological investigations
- Percolation tests
- Removal or abandonment of existing septic fields
- Cost adjustments for inflation
- Staffing personnel and equipment

PHASE 1: IMPROVING EXISTING ACCESS

\$5,230,000 (TOTAL)

Deshazo Mill Access

Sitework	\$526,000
Hiking Trails	\$225,000
River Trail System (multi-use)	\$2,250,000
Bridge (Stream Crossing)	\$84,000
Parking	\$242,000
Vault toilet (single)	\$78,000
Sub Total	\$3,405,000

Mayo Beach Access

Sitework & Mobilization	\$300,000
Vault toilet (single)	\$90,000
Vault toilet (double)	\$165,000
Parking	\$195,000
River Access	\$115,000
River Trail System (multi-use)	\$850,000
Sub Total	1,715,000

Hickory Creek

Sitework, Trails, Parking.....	\$110,000
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PHASE 2: CONTACT STATION, STAFFING, FACILITIES & TRAILS

\$8,306,250 (TOTAL)

Mayo Mountain Access

Sitework & Mobilization	\$700,000
Contact Station	\$1,300,000
Parking	\$380,000
Fishing Dock	\$180,000
Hiking Trails	\$168,000
Landscape Improvements	\$65,000
Sub Total	\$2,793,000

Emergency River Access

Sitework, River Access, Road - Paved.....	\$175,000
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Joyce Ford Rd

Sitework, River Access	\$1,550,500
Day Use, Parking, Restroom	\$534,000
Mini Maintenance Facility.....	\$125,000
Trails.....	\$688,000
Sub Total	\$2,897,500

Cedar Mountain

Sitework & Mobilization.....	\$336,000
Trails.....	\$164,000
River Access, Parking.....	\$144,000
Sub Total	\$644,000

Avalon Day Use Area

Sitework.....	\$357,000
Trails.....	\$135,000
Parking.....	\$135,000
Educational Signage.....	\$30,000
Maintenance Facility.....	\$780,000
Sub Total	\$1,437,000

Dan Valley Rd River Access

Sitework, Parking, River Access.....	\$261,000
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PHASE 3: CAMPING, RIVER ACCESS: PART 1**\$3,093,500 (TOTAL)****Joyce Ford Rd**

Sitework & Mobilization.....	\$960,000
Camping (Shower House, Septic).....	\$2,110,000
Parking.....	\$23,500

PHASE 4: CAMPING, RIVER ACCESS: PART 2**\$1,043,500 (TOTAL)****Deshazo Mill Access - Camping**

Sitework & Mobilization	\$100,000
Camping.....	\$40,500
Bridge (River Crossing).....	\$111,000
Sub Total	\$251,500

Washington Mills

Sitework, River Access, Parking	\$228,000
Historical Interpretation.....	\$24,000
Sub Total	\$252,000

Madison Town Access

Accessible Trails & Parking.....	\$540,000
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